

중학 연산의 빅데이터

빅터 7 연산

정답과 해설

1-A

1	소인수분해	2
2	최대공약수와 최소공배수	8
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1

소인수분해

STEP 1

01 약수와 배수

p. 6

- 1-1 5 1-2 1, 2, 3, 6, 9, 18
 2-1 1, 2, 4, 5, 10, 20 2-2 1, 5, 25
 3-1 1, 2, 4, 8, 16, 32 3-2 1, 2, 3, 6, 7, 14, 21, 42
 4-1 16, 20 4-2 6, 12, 18, 24, 30
 5-1 8, 16, 24, 32, 40 5-2 11, 22, 33, 44, 55
- 1-2 $18 \div 1 = 18$, $18 \div 2 = 9$, $18 \div 3 = 6$, $18 \div 6 = 3$,
 $18 \div 9 = 2$, $18 \div 18 = 1$ 이므로 18의 약수는 1, 2, 3, 6, 9, 18이다.
- 2-1 $20 \div 1 = 20$, $20 \div 2 = 10$, $20 \div 4 = 5$, $20 \div 5 = 4$,
 $20 \div 10 = 2$, $20 \div 20 = 1$ 이므로 20의 약수는 1, 2, 4, 5, 10, 20이다.

02 소수와 합성수

p. 7 ~ p. 8

- 1-1 13, 소수 1-2 1, 2, 7, 14, 합성수
 2-1 1, 3, 5, 15, 합성수 2-2 1, 19, 소수
 3-1 1, 3, 7, 21, 합성수 3-2 1, 3, 9, 27, 합성수
 4-1 1, 2, 4, 7, 14, 28, 합성수
 4-2 1, 29, 소수 5-1 1, 31, 소수
 5-2 1, 3, 11, 33, 합성수 6-1 1, 5, 7, 35, 합성수
 6-2 1, 37, 소수 7-1 1, 41, 소수
 7-2 1, 47, 소수 8-1 1, 7, 49, 합성수
 8-2 1, 2, 5, 10, 25, 50, 합성수
 9-1 1, 2, 4, 13, 26, 52, 합성수
 9-2 1, 53, 소수 10-1 1, 3, 19, 57, 합성수
 10-2 1, 59, 소수 11-1 1, 3, 7, 9, 21, 63, 합성수
 11-2 1, 5, 13, 65, 합성수

2 | 정답과 해설

STEP 2

기본연산 집중연습 | 01~02

p. 9

1 노트

1



12	7	35	46	25
21	31	1	78	9
72	19	73	47	57
8	51	67	60	27
65	41	2	13	20

24	17	53	79	30
10	83	6	63	14
69	23	71	11	39
22	59	15	74	26
28	5	43	61	49
4	93	66	16	32
58	29	37	3	80

STEP 1

03 거듭제곱으로 나타내기(1)

p. 10

- 1-1 3 1-2 2, 1
 2-1 10, 2 2-2 4, 5
 3-1 4 3-2 5^2
 4-1 10^4 4-2 7^3

04 거듭제곱으로 나타내기(2)

p. 11 ~ p. 12

- | | | | |
|------|---|------|---|
| 1-1 | 4, 4 | 1-2 | $\left(\frac{1}{2}\right)^2$ 또는 $\frac{1}{2^2}$ |
| 2-1 | $\left(\frac{1}{3}\right)^4$ 또는 $\frac{1}{3^4}$ | 2-2 | $\left(\frac{1}{7}\right)^5$ 또는 $\frac{1}{7^5}$ |
| 3-1 | 2 | 3-2 | $\frac{1}{7}, 3$ |
| 4-1 | $\frac{3}{4}, 4$ | 4-2 | $\frac{1}{10}, 5$ |
| 5-1 | 2, 3 | 5-2 | $3^3 \times 7^2$ |
| 6-1 | $3 \times 5^3 \times 7$ | 6-2 | $2^2 \times 5 \times 7^2$ |
| 7-1 | 2, 2 | 7-2 | $\left(\frac{1}{2}\right)^3 \times \left(\frac{1}{7}\right)^2$ |
| 8-1 | $\frac{1}{2} \times \left(\frac{1}{3}\right)^3$ | 8-2 | $\left(\frac{1}{5}\right)^2 \times \left(\frac{1}{11}\right)^4$ |
| 9-1 | 2 | 9-2 | $\frac{1}{2^3}$ |
| 10-1 | $\frac{1}{5^2 \times 7^2}$ | 10-2 | $\frac{1}{3^3 \times 5^2}$ |
| 11-1 | 2 | 11-2 | $\left(\frac{3}{7}\right)^3$ |

05 거듭제곱의 값 구하기

p. 13

- | | | | |
|-----|----------------|-----|----------------|
| 1-1 | 125 | 1-2 | 1 |
| 1-3 | 16 | 2-1 | $\frac{1}{25}$ |
| 2-2 | $\frac{4}{49}$ | 2-3 | $\frac{1}{64}$ |
| 3-1 | 2, 6, 2, 9 | 3-2 | 4, 8, 4, 16 |
| 3-3 | 3, 12, 3, 64 | | |

STEP 2

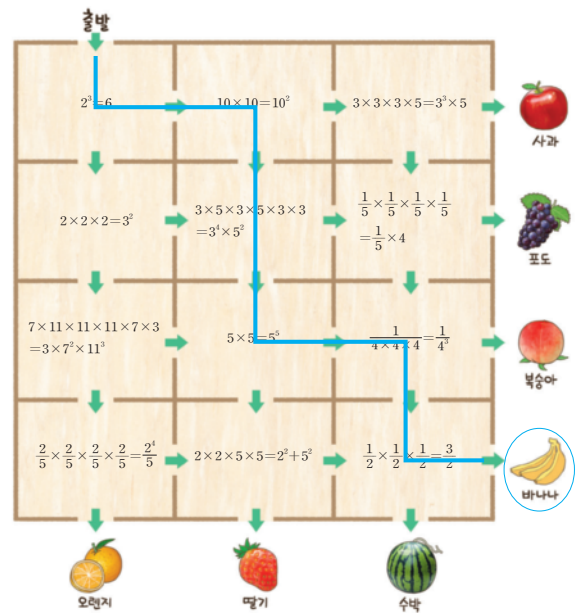
기본연산 집중연습 | 03~05

p. 14 ~ p. 15

- | | | | |
|-----|--|-----|------------------------------|
| 1-1 | 5^4 | 1-2 | 11^2 |
| 1-3 | $2^3 \times 5^2$ | 1-4 | $3^3 \times 7^2$ |
| 1-5 | $2^4 \times 3 \times 5^2$ | 1-6 | $2^3 \times 5^2 \times 11^3$ |
| 1-7 | $\left(\frac{1}{3}\right)^2 \times \left(\frac{1}{7}\right)^3$ | 1-8 | $\left(\frac{2}{3}\right)^4$ |
| 1-9 | $\frac{1}{2^2 \times 3^3}$ | | |
| 2 | 바나나 | | |

BUTTERFLY(나비)

2



STEP 1

06 인수와 소인수

p. 16

- 1-1 18, 9, 9, 18, 3
 1-2 인수 : 1, 2, 4, 5, 10, 20
 소인수 : 2, 5
 2-1 인수 : 1, 5, 25
 소인수 : 5
 2-2 인수 : 1, 2, 3, 5, 6, 10, 15, 30
 소인수 : 2, 3, 5
 3-1 인수 : 1, 3, 13, 39
 소인수 : 3, 13
 3-2 인수 : 1, 2, 4, 11, 22, 44
 소인수 : 2, 11
 4-1 인수 : 1, 2, 4, 13, 26, 52
 소인수 : 2, 13
 4-2 인수 : 1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30, 60
 소인수 : 2, 3, 5

07 소인수분해하는 방법(1)

p. 17

- 1-1 6, 3, 3, 3, 3, 3
 1-2 $100 = 2^2 \times 5^2$, 소인수 : 2, 5
 2-1 $16 = 2^4$, 소인수 : 2
 2-2 $18 = 2 \times 3^2$, 소인수 : 2, 3
 3-1 $48 = 2^4 \times 3$, 소인수 : 2, 3
 3-2 $56 = 2^3 \times 7$, 소인수 : 2, 7
 4-1 $99 = 3^2 \times 11$, 소인수 : 3, 11
 4-2 $180 = 2^2 \times 3^2 \times 5$, 소인수 : 2, 3, 5

1-2 $100 \begin{matrix} \swarrow 2 \\ 50 \end{matrix} \begin{matrix} \swarrow 2 \\ 25 \end{matrix} \begin{matrix} \swarrow 5 \\ 5 \end{matrix}$

2-1 $16 \begin{matrix} \swarrow 2 \\ 8 \end{matrix} \begin{matrix} \swarrow 2 \\ 4 \end{matrix} \begin{matrix} \swarrow 2 \\ 2 \end{matrix}$

2-2 $18 \begin{matrix} \swarrow 2 \\ 9 \end{matrix} \begin{matrix} \swarrow 3 \\ 3 \end{matrix}$

3-1 $48 \begin{matrix} \swarrow 2 \\ 24 \end{matrix} \begin{matrix} \swarrow 2 \\ 12 \end{matrix} \begin{matrix} \swarrow 2 \\ 6 \end{matrix} \begin{matrix} \swarrow 2 \\ 3 \end{matrix}$

3-2 $56 \begin{matrix} \swarrow 2 \\ 28 \end{matrix} \begin{matrix} \swarrow 2 \\ 14 \end{matrix} \begin{matrix} \swarrow 2 \\ 7 \end{matrix}$

4-1 $99 \begin{matrix} \swarrow 3 \\ 33 \end{matrix} \begin{matrix} \swarrow 3 \\ 11 \end{matrix}$

4-2 $180 \begin{matrix} \swarrow 2 \\ 90 \end{matrix} \begin{matrix} \swarrow 2 \\ 45 \end{matrix} \begin{matrix} \swarrow 3 \\ 15 \end{matrix} \begin{matrix} \swarrow 3 \\ 5 \end{matrix}$

08 소인수분해하는 방법(2)

p. 18

- 1-1 2, 2, 12, 2, 6
 $24 = 2^3 \times 3$, 소인수 : 2, 3
 1-2 $28 = 2^2 \times 7$, 소인수 : 2, 7
 2-1 $45 = 3^2 \times 5$, 소인수 : 3, 5
 2-2 $60 = 2^2 \times 3 \times 5$, 소인수 : 2, 3, 5
 3-1 $125 = 5^3$, 소인수 : 5
 3-2 $132 = 2^2 \times 3 \times 11$, 소인수 : 2, 3, 11

1-2
$$\begin{array}{r} 2 \overline{)28} \\ 2 \overline{)14} \\ 7 \end{array}$$

2-1
$$\begin{array}{r} 3 \overline{)45} \\ 3 \overline{)15} \\ 5 \end{array}$$

2-2
$$\begin{array}{r} 2 \overline{)60} \\ 2 \overline{)30} \\ 3 \overline{)15} \\ 5 \end{array}$$

3-1
$$\begin{array}{r} 5 \overline{)125} \\ 5 \overline{)25} \\ 5 \end{array}$$

3-2
$$\begin{array}{r} 2 \overline{)132} \\ 2 \overline{)66} \\ 3 \overline{)33} \\ 11 \end{array}$$

1-1 $10 = 2 \times 5$

$20 = 2^2 \times 5$, 소인수 : 2, 5

1-2 $27 = 3^3$, 소인수 : 3

2-1 $78 = 2 \times 3 \times 13$, 소인수 : 2, 3, 13

2-2 $140 = 2^2 \times 5 \times 7$, 소인수 : 2, 5, 7

3-1 $144 = 2^4 \times 3^2$, 소인수 : 2, 3

3-2 $200 = 2^3 \times 5^2$, 소인수 : 2, 5

1-2 $27 \begin{matrix} \swarrow 3 \\ 9 \swarrow 3 \\ 3 \end{matrix}$ $\begin{array}{r} 3 \overline{)27} \\ 3 \overline{)9} \\ 3 \end{array}$

2-1 $78 \begin{matrix} \swarrow 2 \\ 39 \swarrow 3 \\ 13 \end{matrix}$ $\begin{array}{r} 2 \overline{)78} \\ 3 \overline{)39} \\ 13 \end{array}$

2-2 $140 \begin{matrix} \swarrow 2 \\ 70 \swarrow 2 \\ 35 \swarrow 5 \\ 7 \end{matrix}$ $\begin{array}{r} 2 \overline{)140} \\ 2 \overline{)70} \\ 5 \overline{)35} \\ 7 \end{array}$

3-1 $144 \begin{matrix} \swarrow 2 \\ 72 \swarrow 2 \\ 36 \swarrow 2 \\ 18 \swarrow 2 \\ 9 \swarrow 3 \\ 3 \end{matrix}$ $\begin{array}{r} 2 \overline{)144} \\ 2 \overline{)72} \\ 2 \overline{)36} \\ 2 \overline{)18} \\ 3 \overline{)9} \\ 3 \end{array}$

3-2 $200 \begin{matrix} \swarrow 2 \\ 100 \swarrow 2 \\ 50 \swarrow 2 \\ 25 \swarrow 5 \\ 5 \end{matrix}$ $\begin{array}{r} 2 \overline{)200} \\ 2 \overline{)100} \\ 2 \overline{)50} \\ 5 \overline{)25} \\ 5 \end{array}$

1-1 1, 5, 25

1-2 1, 7, 49, 343

2-1 1, 3, 9, 27, 81

2-2 1, 2, 4, 8, 16, 32

3-1 7, 7, 9, 7, 63, 3, 9, 21

\times	1	3	3^2	3^3
1	$1 \times 1 = 1$	$1 \times 3 = 3$	$1 \times 3^2 = 9$	$1 \times 3^3 = 27$
2	$2 \times 1 = 2$	$2 \times 3 = 6$	$2 \times 3^2 = 18$	$2 \times 3^3 = 54$

약수 : 1, 2, 3, 6, 9, 18, 27, 54

\times	1	7	7^2
1	$1 \times 1 = 1$	$1 \times 7 = 7$	$1 \times 7^2 = 49$
2	$2 \times 1 = 2$	$2 \times 7 = 14$	$2 \times 7^2 = 98$
2^2	$2^2 \times 1 = 4$	$2^2 \times 7 = 28$	$2^2 \times 7^2 = 196$

약수 : 1, 2, 4, 7, 14, 28, 49, 98, 196

\times	1	5	5^2
1	$1 \times 1 = 1$	$1 \times 5 = 5$	$1 \times 5^2 = 25$
3	$3 \times 1 = 3$	$3 \times 5 = 15$	$3 \times 5^2 = 75$
3^2	$3^2 \times 1 = 9$	$3^2 \times 5 = 45$	$3^2 \times 5^2 = 225$

약수 : 1, 3, 5, 9, 15, 25, 45, 75, 225

5-1 ① 36을 소인수분해하면 $36 = 2^2 \times 3^2$

\times	1	3	3^2
1	$1 \times 1 = 1$	$1 \times 3 = 3$	$1 \times 3^2 = 9$
2	$2 \times 1 = 2$	$2 \times 3 = 6$	$2 \times 3^2 = 18$
2^2	$2^2 \times 1 = 4$	$2^2 \times 3 = 12$	$2^2 \times 3^2 = 36$

③ 약수는 1, 2, 3, 4, 6, 9, 12, 18, 36

5-2 ① 100을 소인수분해하면 $100 = 2^2 \times 5^2$

\times	1	5	5^2
1	$1 \times 1 = 1$	$1 \times 5 = 5$	$1 \times 5^2 = 25$
2	$2 \times 1 = 2$	$2 \times 5 = 10$	$2 \times 5^2 = 50$
2^2	$2^2 \times 1 = 4$	$2^2 \times 5 = 20$	$2^2 \times 5^2 = 100$

③ 약수는 1, 2, 4, 5, 10, 20, 25, 50, 100

6-1 ① 108을 소인수분해하면 $108 = 2^2 \times 3^3$

\times	1	3	3^2	3^3
1	$1 \times 1 = 1$	$1 \times 3 = 3$	$1 \times 3^2 = 9$	$1 \times 3^3 = 27$
2	$2 \times 1 = 2$	$2 \times 3 = 6$	$2 \times 3^2 = 18$	$2 \times 3^3 = 54$
2^2	$2^2 \times 1 = 4$	$2^2 \times 3 = 12$	$2^2 \times 3^2 = 36$	$2^2 \times 3^3 = 108$

③ 약수는 1, 2, 3, 4, 6, 9, 12, 18, 27, 36, 54, 108

6-2 ① 135를 소인수분해하면 $135 = 3^3 \times 5$

\times	1	5
1	$1 \times 1 = 1$	$1 \times 5 = 5$
3	$3 \times 1 = 3$	$3 \times 5 = 15$
3^2	$3^2 \times 1 = 9$	$3^2 \times 5 = 45$
3^3	$3^3 \times 1 = 27$	$3^3 \times 5 = 135$

③ 약수는 1, 3, 5, 9, 15, 27, 45, 135

7-1 ① 250을 소인수분해하면 $250=2 \times 5^3$

②

×	1	5	5^2	5^3
1	$1 \times 1=1$	$1 \times 5=5$	$1 \times 5^2=25$	$1 \times 5^3=125$
2	$2 \times 1=2$	$2 \times 5=10$	$2 \times 5^2=50$	$2 \times 5^3=250$

③ 약수는 1, 2, 5, 10, 25, 50, 125, 250

7-2 ① 392를 소인수분해하면 $392=2^3 \times 7^2$

②

×	1	7	7^2
1	$1 \times 1=1$	$1 \times 7=7$	$1 \times 7^2=49$
2	$2 \times 1=2$	$2 \times 7=14$	$2 \times 7^2=98$
2^2	$2^2 \times 1=4$	$2^2 \times 7=28$	$2^2 \times 7^2=196$
2^3	$2^3 \times 1=8$	$2^3 \times 7=56$	$2^3 \times 7^2=392$

③ 약수는 1, 2, 4, 7, 8, 14, 28, 49, 56, 98, 196, 392

11 약수의 개수 구하기

p. 22 ~ p. 23

1-1 2, 2, 3

1-2 6

2-1 3

2-2 4

3-1 2, 3, 2, 3, 12

3-2 9

4-1 20

4-2 24

5-1 8

5-2 8

6-1 1, 1, 1, 18

6-2 12

7-1 24

7-2 16

8-1 2, 2, 6

8-2 $36=2^2 \times 3^2, (2+1) \times (2+1)=9(\text{개})$

9-1 $52=2^2 \times 13, (2+1) \times (1+1)=6(\text{개})$

9-2 $200=2^3 \times 5^2, (3+1) \times (2+1)=12(\text{개})$

10-1 $120=2^3 \times 3 \times 5, (3+1) \times (1+1) \times (1+1)=16(\text{개})$

10-2 $144=2^4 \times 3^2, (4+1) \times (2+1)=15(\text{개})$

11-1 $256=2^8, 8+1=9(\text{개})$

11-2 $504=2^3 \times 3^2 \times 7, (3+1) \times (2+1) \times (1+1)=24(\text{개})$

STEP 2

기본연산 집중연습 | 06~11

p. 24 ~ p. 25

1-1 $42=2 \times 3 \times 7$, 소인수 : 2, 3, 7

1-2 $70=2 \times 5 \times 7$, 소인수 : 2, 5, 7

1-3 $90=2 \times 3^2 \times 5$, 소인수 : 2, 3, 5

1-4 $126=2 \times 3^2 \times 7$, 소인수 : 2, 3, 7

1-5 $143=11 \times 13$, 소인수 : 11, 13

1-6 $210=2 \times 3 \times 5 \times 7$, 소인수 : 2, 3, 5, 7

2-1 ① $75=3 \times 5^2$

②

×	1	5	5^2
1	$1 \times 1=1$	$1 \times 5=5$	$1 \times 5^2=25$
3	$3 \times 1=3$	$3 \times 5=15$	$3 \times 5^2=75$

③ 1, 3, 5, 15, 25, 75

2-2 ① $441=3^2 \times 7^2$

②

×	1	7	7^2
1	$1 \times 1=1$	$1 \times 7=7$	$1 \times 7^2=49$
3	$3 \times 1=3$	$3 \times 7=21$	$3 \times 7^2=147$
3^2	$3^2 \times 1=9$	$3^2 \times 7=63$	$3^2 \times 7^2=441$

③ 1, 3, 7, 9, 21, 49, 63, 147, 441

3-1 1, 3, 3^2

3-2 $1, 2^2, 2 \times 3, 2^2 \times 3^3$

3-3 $2 \times 3 \times 5, 2 \times 3^2 \times 5, 3^2 \times 5^2$

4-1 6개 연구 2, 2, 6

4-2 6개

4-3 9개

4-4 24개

4-5 12개

4-6 12개

수현

1-1 $2 \overline{)42}$

$3 \overline{)21}$
7

1-2 $2 \overline{)70}$

$5 \overline{)35}$
7

1-3 $2 \overline{)90}$

$3 \overline{)45}$
 $3 \overline{)15}$
5

1-4 $2 \overline{)126}$

$3 \overline{)63}$
 $3 \overline{)21}$
7

1-5 $11 \overline{)143}$

13

$$\begin{array}{r} 1-6 \quad 2 \overline{)210} \\ 3 \overline{)105} \\ 5 \overline{)35} \\ 7 \end{array}$$

4-2 5×7^2 의 약수의 개수는 $(1+1) \times (2+1) = 6$ (개)

4-3 $4 \times 3^2 = 2^2 \times 3^2$ 이므로 약수의 개수는
 $(2+1) \times (2+1) = 9$ (개)

4-4 $2 \times 3^2 \times 5^3$ 의 약수의 개수는
 $(1+1) \times (2+1) \times (3+1) = 24$ (개)

4-5 $84 = 2^2 \times 3 \times 7$ 이므로 약수의 개수는
 $(2+1) \times (1+1) \times (1+1) = 12$ (개)

4-6 $198 = 2 \times 3^2 \times 11$ 이므로 약수의 개수는
 $(1+1) \times (2+1) \times (1+1) = 12$ (개)

7 (1) $80 = 2^4 \times 5$

(2) ×	1	5
1	$1 \times 1 = 1$	$1 \times 5 = 5$
2	$2 \times 1 = 2$	$2 \times 5 = 10$
2^2	$2^2 \times 1 = 4$	$2^2 \times 5 = 20$
2^3	$2^3 \times 1 = 8$	$2^3 \times 5 = 40$
2^4	$2^4 \times 1 = 16$	$2^4 \times 5 = 80$

(3) 1, 2, 4, 5, 8, 10, 16, 20, 40, 80

8 (1) 3개 (2) 6개 (3) 6개 (4) 20개

(5) 9개 (6) 24개 (7) 6개 (8) 16개

2 $15 = 3 \times 5$, $33 = 3 \times 11$, $91 = 7 \times 13$ 이므로 합성수이다.

5 (2) $4 \times 4 \times 4 = 4^3$

(4) $\frac{2}{3} \times \frac{2}{3} \times \frac{2}{3} \times \frac{2}{3} = \left(\frac{2}{3}\right)^4$

8 (1) 2^2 의 약수의 개수는 $2+1=3$ (개)

(2) 3^5 의 약수의 개수는 $5+1=6$ (개)

(3) $28 = 2^2 \times 7$ 이므로 약수의 개수는
 $(2+1) \times (1+1) = 6$ (개)

(4) $2^4 \times 5^3$ 의 약수의 개수는 $(4+1) \times (3+1) = 20$ (개)

(5) $5^2 \times 11^2$ 의 약수의 개수는 $(2+1) \times (2+1) = 9$ (개)

(6) $2 \times 3^3 \times 7^2$ 의 약수의 개수는
 $(1+1) \times (3+1) \times (2+1) = 24$ (개)

(7) $2 \times 9 = 2 \times 3^2$ 이므로 약수의 개수는
 $(1+1) \times (2+1) = 6$ (개)

(8) $5 \times 7 \times 8 = 2^3 \times 5 \times 7$ 이므로 약수의 개수는
 $(3+1) \times (1+1) \times (1+1) = 16$ (개)

STEP 3

기본연산 테스트

p. 26 ~ p. 27

1 3, 13

2 15, 33, 91

3 (1) 밑 : 3, 지수 : 2 (2) 밑 : 1, 지수 : 10
 (3) 밑 : 11, 지수 : 1 (4) 밑 : $\frac{1}{7}$, 지수 : 2

(5) 밑 : $\frac{5}{8}$, 지수 : 4

4 (1) 3^3 (2) $5^3 \times 7^2$ (3) $2^4 \times 5^2$

(4) $\left(\frac{1}{2}\right)^2 \times \left(\frac{1}{3}\right)^2$ (5) $\frac{1}{2^4}$ (6) $\frac{1}{2 \times 3^2 \times 5^3}$ (7) $\left(\frac{3}{10}\right)^3$

5 (1) ○ (2) × (3) ○ (4) × (5) ○

6 (1) $30 = 2 \times 3 \times 5$ (2) $68 = 2^2 \times 17$

(3) $88 = 2^3 \times 11$ (4) $169 = 13^2$

(5) $184 = 2^3 \times 23$ (6) $240 = 2^4 \times 3 \times 5$

(7) $360 = 2^3 \times 3^2 \times 5$ (8) $495 = 3^2 \times 5 \times 11$

(9) $580 = 2^2 \times 5 \times 29$ (10) $900 = 2^2 \times 3^2 \times 5^2$

2

최대공약수와 최소공배수

STEP 1

01 공약수와 최대공약수 구하기

p. 30

1-1 4, 12 / 1, 2, 4 / 4

1-2 1, 2, 3, 6, 9, 18 / 1, 3, 9, 27 / 1, 3, 9 / 9

2-1 1, 3, 5, 15 / 1, 5, 25 / 1, 5 / 5

2-2 1, 2, 3, 4, 6, 8, 12, 24 / 1, 2, 4, 8, 16, 32 / 1, 2, 4, 8 / 8

3-1 1, 3

3-2 1, 2, 3, 6

4-1 1, 2, 5, 10

4-2 1, 2, 4, 7, 14, 28

02 서로소인 두 자연수 찾기

p. 31

1-1 7 / 최대공약수 : 1, 서로소 : ○

1-2 2, 2, 5 / 최대공약수 : 2, 서로소 : ×

2-1 최대공약수 : 1, 서로소 : ○

2-2 최대공약수 : 7, 서로소 : ×

3-1 최대공약수 : 1, 서로소 : ○

3-2 최대공약수 : 5, 서로소 : ×

4-1 최대공약수 : 1, 서로소 : ○

4-2 최대공약수 : 1, 서로소 : ○

5-1 최대공약수 : 2, 서로소 : ×

5-2 최대공약수 : 17, 서로소 : ×

03 공약수로 나누어 최대공약수 구하기(1) : 두 수

p. 32

1-1 7, 7, 14

1-2 9

2-1 15

2-2 6

3-1 8

3-2 8

4-1 10

4-2 6

1-2 $3 \overline{) 36 \ 45}$

$3 \overline{) 12 \ 15}$

4 5

→ (최대공약수) = $3 \times 3 = 9$

2-1 $3 \overline{) 60 \ 45}$

$5 \overline{) 20 \ 15}$

4 3

→ (최대공약수) = $3 \times 5 = 15$

2-2 $2 \overline{) 18 \ 42}$

$3 \overline{) 9 \ 21}$

3 7

→ (최대공약수) = $2 \times 3 = 6$

3-1 $2 \overline{) 24 \ 40}$

$2 \overline{) 12 \ 20}$

$2 \overline{) 6 \ 10}$

3 5

→ (최대공약수) = $2 \times 2 \times 2 = 8$

3-2 $2 \overline{) 48 \ 56}$

$2 \overline{) 24 \ 28}$

$2 \overline{) 12 \ 14}$

6 7

→ (최대공약수) = $2 \times 2 \times 2 = 8$

4-1 $2 \overline{) 20 \ 50}$

$5 \overline{) 10 \ 25}$

2 5

→ (최대공약수) = $2 \times 5 = 10$

4-2 $2 \overline{) 30 \ 54}$

$3 \overline{) 15 \ 27}$

5 9

→ (최대공약수) = $2 \times 3 = 6$

04 공약수로 나누어 최대공약수 구하기(2) : 세 수

p. 33

1-1 2, 4, 15, 2

1-2 5

2-1 4

2-2 15

3-1 6

3-2 14

4-1 20

4-2 8

$$\begin{array}{r} 1-2 \quad 5 \overline{) 20 \quad 35 \quad 30} \\ \underline{4 \quad 7 \quad 6} \\ \Rightarrow (\text{최대공약수}) = 5 \end{array}$$

$$\begin{array}{r} 2-1 \quad 2 \overline{) 16 \quad 36 \quad 56} \\ \underline{2 \overline{) 8 \quad 18 \quad 28}} \\ \underline{4 \quad 9 \quad 14} \\ \Rightarrow (\text{최대공약수}) = 2 \times 2 = 4 \end{array}$$

$$\begin{array}{r} 2-2 \quad 3 \overline{) 30 \quad 75 \quad 105} \\ \underline{5 \overline{) 10 \quad 25 \quad 35}} \\ \underline{2 \quad 5 \quad 7} \\ \Rightarrow (\text{최대공약수}) = 3 \times 5 = 15 \end{array}$$

$$\begin{array}{r} 3-1 \quad 2 \overline{) 18 \quad 42 \quad 54} \\ \underline{3 \overline{) 9 \quad 21 \quad 27}} \\ \underline{3 \quad 7 \quad 9} \\ \Rightarrow (\text{최대공약수}) = 2 \times 3 = 6 \end{array}$$

$$\begin{array}{r} 3-2 \quad 2 \overline{) 28 \quad 70 \quad 84} \\ \underline{7 \overline{) 14 \quad 35 \quad 42}} \\ \underline{2 \quad 5 \quad 6} \\ \Rightarrow (\text{최대공약수}) = 2 \times 7 = 14 \end{array}$$

$$\begin{array}{r} 4-1 \quad 2 \overline{) 40 \quad 60 \quad 80} \\ \underline{2 \overline{) 20 \quad 30 \quad 40}} \\ \underline{5 \overline{) 10 \quad 15 \quad 20}} \\ \underline{2 \quad 3 \quad 4} \\ \Rightarrow (\text{최대공약수}) = 2 \times 2 \times 5 = 20 \end{array}$$

$$\begin{array}{r} 4-2 \quad 2 \overline{) 24 \quad 40 \quad 56} \\ \underline{2 \overline{) 12 \quad 20 \quad 28}} \\ \underline{2 \overline{) 6 \quad 10 \quad 14}} \\ \underline{3 \quad 5 \quad 7} \\ \Rightarrow (\text{최대공약수}) = 2 \times 2 \times 2 = 8 \end{array}$$

05 소인수분해를 이용하여 최대공약수 구하기 p. 34 ~ 35

1-1	2	1-2	2, 4
2-1	2, 4	2-2	2, 3, 6
3-1	$2^2, 3, 12$	3-2	$3^2 \times 5, 45$
4-1	$2^2, 3, 12$	4-2	$2 \times 5, 10$
5-1	$3^2, 3, 3, 6$	5-2	10
6-1	8	6-2	21
7-1	18	7-2	12
8-1	6	8-2	14
9-1	2	9-2	12

$$\begin{array}{r} 5-2 \quad 20 = 2^2 \times 5 \\ 30 = 2 \times 3 \times 5 \\ \hline (\text{최대공약수}) = 2 \times 5 = 10 \end{array}$$

$$\begin{array}{r} 6-1 \quad 32 = 2^5 \\ 56 = 2^3 \times 7 \\ \hline (\text{최대공약수}) = 2^3 = 8 \end{array}$$

$$\begin{array}{r} 6-2 \quad 42 = 2 \times 3 \times 7 \\ 63 = 3^2 \times 7 \\ \hline (\text{최대공약수}) = 3 \times 7 = 21 \end{array}$$

$$\begin{array}{r} 7-1 \quad 72 = 2^3 \times 3^2 \\ 162 = 2 \times 3^4 \\ \hline (\text{최대공약수}) = 2 \times 3^2 = 18 \end{array}$$

$$\begin{array}{r} 7-2 \quad 120 = 2^3 \times 3 \times 5 \\ 252 = 2^2 \times 3^2 \times 7 \\ \hline (\text{최대공약수}) = 2^2 \times 3 = 12 \end{array}$$

$$\begin{array}{r} 8-1 \quad 18 = 2 \times 3^2 \\ 60 = 2^2 \times 3 \times 5 \\ 144 = 2^4 \times 3^2 \\ \hline (\text{최대공약수}) = 2 \times 3 = 6 \end{array}$$

$$\begin{array}{r} 8-2 \quad 28 = 2^2 \times 7 \\ 42 = 2 \times 3 \times 7 \\ 56 = 2^3 \times 7 \\ \hline (\text{최대공약수}) = 2 \times 7 = 14 \end{array}$$

$$\begin{array}{r} 9-1 \quad 6 = 2 \times 3 \\ 20 = 2^2 \times 5 \\ 84 = 2^2 \times 3 \times 7 \\ \hline (\text{최대공약수}) = 2 \end{array}$$

$$\begin{array}{r} 9-2 \quad 24 = 2^3 \times 3 \\ 96 = 2^5 \times 3 \\ 132 = 2^2 \times 3 \times 11 \\ \hline (\text{최대공약수}) = 2^2 \times 3 = 12 \end{array}$$

06 공배수와 최소공배수 구하기

p. 36

1-1 $12, 16, 24 / 24, 36 / 12, 24, \dots / 12$

1-2 $5, 10, 15, 20, \dots / 10, 20, 30, \dots / 10, 20, \dots / 10$

2-1 $3, 6, 9, 12, 15, 18, 21, 24, 27, 30, \dots /$
 $5, 10, 15, 20, 25, 30, \dots / 15, 30, \dots / 15$

2-2 $6, 12, 18, 24, 30, 36, 42, 48, \dots /$
 $8, 16, 24, 32, 40, 48, \dots / 24, 48, \dots / 24$

3-1 $20, 30$ 3-2 $12, 24, 36$

4-1 $28, 56, 84$ 4-2 $40, 80, 120$

07 공약수로 나누어 최소공배수 구하기(1): 두 수

p. 37

1-1 $3, 5, 3, 5, 180$

1-2 30

2-1 36

2-2 126

3-1 90

3-2 84

4-1 160

4-2 180

1-2
$$\begin{array}{r} 3 \overline{) 15 \ 30} \\ 5 \overline{) \ 5 \ 10} \\ 1 \ 2 \end{array}$$

⇒ (최소공배수) = $3 \times 5 \times 2 = 30$

2-1
$$\begin{array}{r} 2 \overline{) 12 \ 18} \\ 3 \overline{) \ 6 \ 9} \\ 2 \ 3 \end{array}$$

⇒ (최소공배수) = $2 \times 3 \times 2 \times 3 = 36$

2-2
$$\begin{array}{r} 3 \overline{) 18 \ 63} \\ 3 \overline{) \ 6 \ 21} \\ 2 \ 7 \end{array}$$

⇒ (최소공배수) = $3 \times 3 \times 2 \times 7 = 126$

3-1
$$\begin{array}{r} 3 \overline{) 30 \ 45} \\ 5 \overline{) 10 \ 15} \\ 2 \ 3 \end{array}$$

⇒ (최소공배수) = $3 \times 5 \times 2 \times 3 = 90$

3-2
$$\begin{array}{r} 2 \overline{) 28 \ 84} \\ 2 \overline{) 14 \ 42} \\ 7 \overline{) \ 7 \ 21} \\ 1 \ 3 \end{array}$$

⇒ (최소공배수) = $2 \times 2 \times 7 \times 3 = 84$

4-1
$$\begin{array}{r} 2 \overline{) 32 \ 40} \\ 2 \overline{) 16 \ 20} \\ 2 \overline{) \ 8 \ 10} \\ 4 \ 5 \end{array}$$

⇒ (최소공배수) = $2 \times 2 \times 2 \times 4 \times 5 = 160$

4-2
$$\begin{array}{r} 2 \overline{) 36 \ 90} \\ 3 \overline{) 18 \ 45} \\ 3 \overline{) \ 6 \ 15} \\ 2 \ 5 \end{array}$$

⇒ (최소공배수) = $2 \times 3 \times 3 \times 2 \times 5 = 180$

08 공약수로 나누어 최소공배수 구하기(2): 세 수

p. 38

1-1 $2, 2, 420$

1-2 600

2-1 36

2-2 630

3-1 1120

3-2 378

4-1 240

4-2 210

1-2
$$\begin{array}{r} 5 \overline{) 15 \ 25 \ 40} \\ 3 \ 5 \ 8 \end{array}$$

⇒ (최소공배수) = $5 \times 3 \times 5 \times 8 = 600$

2-1
$$\begin{array}{r} 3 \overline{) \ 6 \ 9 \ 12} \\ 2 \overline{) \ 2 \ 3 \ 4} \\ 1 \ 3 \ 2 \end{array}$$

⇒ (최소공배수) = $3 \times 2 \times 3 \times 2 = 36$

2-2
$$\begin{array}{r} 7 \overline{) 35 \ 42 \ 63} \\ 3 \overline{) \ 5 \ 6 \ 9} \\ 5 \ 2 \ 3 \end{array}$$

⇒ (최소공배수) = $7 \times 3 \times 5 \times 2 \times 3 = 630$

3-1
$$\begin{array}{r} 2 \overline{) 20 \ 32 \ 56} \\ 2 \overline{) 10 \ 16 \ 28} \\ 2 \overline{) \ 5 \ 8 \ 14} \\ 5 \ 4 \ 7 \end{array}$$

⇒ (최소공배수) = $2 \times 2 \times 2 \times 5 \times 4 \times 7 = 1120$

3-2
$$\begin{array}{r} 2 \overline{) 18 \ 42 \ 54} \\ 3 \overline{) \ 9 \ 21 \ 27} \\ 3 \overline{) \ 3 \ 7 \ 9} \\ 1 \ 7 \ 3 \end{array}$$

⇒ (최소공배수) = $2 \times 3 \times 3 \times 7 \times 3 = 378$

4-1
$$\begin{array}{r} 2 \overline{) 40 \ 60 \ 80} \\ 2 \overline{) 20 \ 30 \ 40} \\ 5 \overline{) 10 \ 15 \ 20} \\ 2 \overline{) \ 2 \ 3 \ 4} \\ 1 \ 3 \ 2 \end{array}$$

⇒ (최소공배수) = $2 \times 2 \times 5 \times 2 \times 3 \times 2 = 240$

4-2
$$\begin{array}{r} 3 \overline{) 21 \ 30 \ 105} \\ 5 \overline{) \ 7 \ 10 \ 35} \\ 7 \overline{) \ 7 \ 2 \ 7} \\ 1 \ 2 \ 1 \end{array}$$

⇒ (최소공배수) = $3 \times 5 \times 7 \times 2 = 210$

09 소인수분해를 이용하여 최소공배수 구하기 p. 39 ~ p. 40

1-1	2, 70	1-2	2, 2, 60
2-1	168	2-2	$2 \times 3 \times 3 \times 5 \times 7$, 630
3-1	2, 7	3-2	$2, 3^3$
4-1	$3, 5^3, 7^2$	4-2	$2^4 \times 3^2 \times 5$
5-1	5, 5, 5, 30	5-2	84
6-1	36	6-2	72
7-1	180	7-2	3600
8-1	$2^2, 5, 2^3, 3^2, 2^3, 3^2, 5, 360$	8-2	756
9-1	120	9-2	490

5-2 $28 = 2^2 \times 7$
 $84 = 2^2 \times 3 \times 7$
 (최소공배수) $= 2^2 \times 3 \times 7 = 84$

6-1 $12 = 2^2 \times 3$
 $18 = 2 \times 3^2$
 (최소공배수) $= 2^2 \times 3^2 = 36$

6-2 $24 = 2^3 \times 3$
 $36 = 2^2 \times 3^2$
 (최소공배수) $= 2^3 \times 3^2 = 72$

7-1 $45 = 3^2 \times 5$
 $60 = 2^2 \times 3 \times 5$
 (최소공배수) $= 2^2 \times 3^2 \times 5 = 180$

7-2 $100 = 2^2 \times 5^2$
 $144 = 2^4 \times 3^2$
 (최소공배수) $= 2^4 \times 3^2 \times 5^2 = 3600$

8-2 $12 = 2^2 \times 3$
 $27 = 3^3$
 $42 = 2 \times 3 \times 7$
 (최소공배수) $= 2^2 \times 3^3 \times 7 = 756$

9-1 $8 = 2^3$
 $12 = 2^2 \times 3$
 $20 = 2^2 \times 5$
 (최소공배수) $= 2^3 \times 3 \times 5 = 120$

9-2 $35 = 5 \times 7$
 $49 = 7^2$
 $70 = 2 \times 5 \times 7$
 (최소공배수) $= 2 \times 5 \times 7^2 = 490$

STEP 2

기본연산 집중연습 | 01~09

p. 41 ~ p. 43

- 1-1 1, 3, 5, 15
 1-2 1, 2, 4, 5, 10, 20
 1-3 1, 7, 49
 1-4 1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30, 60
 2-1 15, 30, 45, 60, 75, 90
 2-2 22, 44, 66, 88
 2-3 27, 54, 81
 2-4 35, 70
 3-1 (7, 18)
 3-2 (3, 7)
 3-3 (10, 21)
 3-4 (28, 33)
 4-1 최대공약수 : 3, 최소공배수 : 108
 4-2 최대공약수 : 12, 최소공배수 : 120
 4-3 최대공약수 : 15, 최소공배수 : 225
 4-4 최대공약수 : 14, 최소공배수 : 280
 4-5 최대공약수 : 8, 최소공배수 : 352
 4-6 최대공약수 : 30, 최소공배수 : 600
 4-7 최대공약수 : 6, 최소공배수 : 252
 4-8 최대공약수 : 4, 최소공배수 : 160
 4-9 최대공약수 : 12, 최소공배수 : 720
 4-10 최대공약수 : 15, 최소공배수 : 1050
 4-11 최대공약수 : 12, 최소공배수 : 1680
 4-12 최대공약수 : 6, 최소공배수 : 1080
 5-1 최대공약수 : 2×3^2 , 최소공배수 : $2^3 \times 3^3$
 5-2 최대공약수 : $2^3 \times 3$, 최소공배수 : $2^4 \times 3^2 \times 5 \times 7$
 5-3 최대공약수 : 3^2 , 최소공배수 : $2^2 \times 3^2 \times 5^3 \times 7$
 5-4 최대공약수 : $2^2 \times 3^2$, 최소공배수 : $2^3 \times 3^2 \times 5 \times 7^2$
 5-5 최대공약수 : 3, 최소공배수 : $2^3 \times 3^2 \times 7$
 5-6 최대공약수 : 2×3 , 최소공배수 : $2^3 \times 3^4 \times 5 \times 7$
 5-7 최대공약수 : 2×3 , 최소공배수 : $2^3 \times 3^3 \times 5 \times 7$
 5-8 최대공약수 : 3×7 , 최소공배수 : $2 \times 3^2 \times 5^2 \times 7$

역지사지

STEP 1

10 최대공약수의 활용

p. 44 ~ p. 46

1-1 ① 3, 4, 6, 12, 12 ② 5, 15, 15 ③ 12, 15, 3

1-2 12명

1-3 7개

2-1 20개

2-2 8명

3-1 (1) ① 90 ② 126 ③ 90, 126 ④ 90, 126, 18, 18

(2) 18, 5, 18, 7, 5, 7, 35

3-2 (1) 24 cm (2) 30개

3-3 (1) 21 cm (2) 35개

4-1 약수, 약수, 최대공약수, 6

4-2 8

4-3 4

5-1 약수, 약수, 최대공약수, 6

5-2 1, 2, 4

5-3 9

1-2 되도록 많은 학생들에게 똑같이 나누어 주려면 학생 수는 36, 48의 최대공약수이어야 한다.

따라서 구하는 학생 수는

$$2 \times 2 \times 3 = 12(\text{명})$$

$$\begin{array}{r} 2 \overline{) 36 \ 48} \\ 2 \overline{) 18 \ 24} \\ 3 \overline{) \ 9 \ 12} \\ 3 \ 4 \end{array}$$

1-3 각 상자에 들어 있는 사탕, 쿠키의 수를 각각 같게 하고 상자를 가능한 한 많이 만들려면 상자의 수는 28, 35의 최대공약수이어야 한다.

따라서 구하는 상자의 수는 7개이다.

$$\begin{array}{r} 7 \overline{) 28 \ 35} \\ 4 \ 5 \end{array}$$

2-1 될 수 있는 대로 많은 상자에 똑같이 나누어 담으려면 상자의 수는 140, 180, 240의 최대공약수이어야 한다.

따라서 구하는 상자의 수는

$$2 \times 2 \times 5 = 20(\text{개})$$

$$\begin{array}{r} 2 \overline{) 140 \ 180 \ 240} \\ 2 \overline{) \ 70 \ 90 \ 120} \\ 5 \overline{) \ 35 \ 45 \ 60} \\ 7 \ 9 \ 12 \end{array}$$

2-2 최대한 많은 학생들에게 똑같이 나누어 주려면 학생 수는 64, 40, 72의 최대공약수이어야 한다.

따라서 구하는 학생 수는

$$2 \times 2 \times 2 = 8(\text{명})$$

$$\begin{array}{r} 2 \overline{) 64 \ 40 \ 72} \\ 2 \overline{) 32 \ 20 \ 36} \\ 2 \overline{) 16 \ 10 \ 18} \\ 8 \ 5 \ 9 \end{array}$$

3-2 (1) 가능한 한 큰 정사각형 모양의 타일을 붙이려면 타일의 한 변의 길이는 144와 120의 최대공약수이어야 한다.

따라서 타일의 한 변의 길이는

$$2 \times 2 \times 2 \times 3 = 24(\text{cm})$$

(2) 가로는 $144 \div 24 = 6(\text{개})$, 세로는 $120 \div 24 = 5(\text{개})$ 이므로 필요한 타일의 개수는

$$6 \times 5 = 30(\text{개})$$

$$\begin{array}{r} 2 \overline{) 144 \ 120} \\ 2 \overline{) \ 72 \ 60} \\ 2 \overline{) \ 36 \ 30} \\ 3 \overline{) \ 18 \ 15} \\ 6 \ 5 \end{array}$$

3-3 (1) 가능한 한 큰 정사각형 모양의 타일을 붙이려면 타일의 한 변의 길이는 147과 105의 최대공약수이어야 한다.

따라서 타일의 한 변의 길이는

$$3 \times 7 = 21(\text{cm})$$

(2) 가로는 $147 \div 21 = 7(\text{개})$, 세로는 $105 \div 21 = 5(\text{개})$ 이므로 필요한 타일의 개수는

$$7 \times 5 = 35(\text{개})$$

$$\begin{array}{r} 3 \overline{) 147 \ 105} \\ 7 \overline{) \ 49 \ 35} \\ 7 \ 5 \end{array}$$

4-2 어떤 자연수는 24, 32의 공약수이고 이러한 수 중 가장 큰 수는 24와 32의 최대공약수이므로

$$2 \times 2 \times 2 = 8$$

$$\begin{array}{r} 2 \overline{) 24 \ 32} \\ 2 \overline{) 12 \ 16} \\ 2 \overline{) \ 6 \ 8} \\ 3 \ 4 \end{array}$$

4-3 어떤 자연수는 20, 28의 공약수이고 이러한 수 중 가장 큰 수는 20과 28의 최대공약수이므로

$$2 \times 2 = 4$$

$$\begin{array}{r} 2 \overline{) 20 \ 28} \\ 2 \overline{) 10 \ 14} \\ 5 \ 7 \end{array}$$

5-2 $\frac{20}{n}, \frac{32}{n}$ 를 동시에 자연수로 만드는 n 의 값은 20과 32의 공약수이다.

이때 20과 32의 최대공약수가 $2 \times 2 = 4$ 이

므로 구하는 n 의 값은 4의 약수인 1, 2, 4이다.

$$\begin{array}{r} 2 \overline{) 20 \ 32} \\ 2 \overline{) 10 \ 16} \\ 5 \ 8 \end{array}$$

5-3 $\frac{27}{n}, \frac{36}{n}$ 을 동시에 자연수로 만드는 n 의 값은 27과 36의 공약수이고, 이 중 가장 큰 수는 27과 36의 최대공약수이므로 구하는 n 의 값 중 가장 큰 수는

$$3 \times 3 = 9$$

$$\begin{array}{r} 3 \overline{) 27 \ 36} \\ 3 \overline{) \ 9 \ 12} \\ 3 \ 4 \end{array}$$

11 최소공배수의 활용

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1-1 ① 12, 18, 24, 6 ② 18, 27, 9 ③ 6, 9 ④ 6, 9, 18, 6, 18

1-2 오전 10시 40분

1-3 오전 9시 36분

2-1 오전 6시

2-2 오전 11시 45분

3-1 (1) ① 12 ② 10 ③ 12, 10 ④ 12, 10, 60, 60

(2) 60, 5, 60, 6, 5, 6, 30

3-2 (1) 75 cm (2) 15장

3-3 (1) 56 cm (2) 28장

4-1 배수, 배수, 최소공배수, 24

4-2 30

4-3 45

5-1 배수, 18, 배수, 최소공배수, 36

5-2 160

5-3 108

1-2 두 버스 A, B가 오전 10시 이후에 처음으로 다시 동시에 출발하는 시각은 8, 10의 최소공배수인 $2 \times 4 \times 5 = 40$ (분) 후이다.
따라서 오전 10시 이후에 처음으로 다시 동시에 출발하는 시각은 오전 10시 40분이다.

$$\begin{array}{r} 2 \overline{) 8 \ 10} \\ \underline{4 \ 5} \end{array}$$

1-3 두 열차가 오전 8시 이후에 처음으로 다시 동시에 출발하는 시각은 24, 32의 최소공배수인 $2 \times 2 \times 2 \times 3 \times 4 = 96$ (분) 후이다.
따라서 오전 8시 이후에 처음으로 다시 동시에 출발하는 시각은 오전 9시 36분이다.

$$\begin{array}{r} 2 \overline{) 24 \ 32} \\ 2 \overline{) 12 \ 16} \\ 2 \overline{) 6 \ 8} \\ \underline{3 \ 4} \end{array}$$

참고 1시간은 60분이므로 96분은 1시간 36분이다.
 $\rightarrow 60 + 36$

2-1 세 버스 A, B, C가 오전 5시 이후에 처음으로 다시 동시에 출발하는 시각은 10, 15, 20의 최소공배수인 $5 \times 2 \times 3 \times 2 = 60$ (분) 후이다.
따라서 오전 5시 이후에 처음으로 다시 동시에 출발하는 시각은 오전 6시이다.

$$\begin{array}{r} 5 \overline{) 10 \ 15 \ 20} \\ 2 \overline{) 2 \ 3 \ 4} \\ \underline{1 \ 3 \ 2} \end{array}$$

2-2 일반버스, 좌석버스, 직행버스가 오전 8시 이후에 처음으로 다시 동시에 출발하는 시각은 15, 25, 45의 최소공배수인 $5 \times 3 \times 5 \times 3 = 225$ (분) 후이다.
따라서 오전 8시 이후에 처음으로 다시 동시에 출발하는 시각은 오전 11시 45분이다.

$$\begin{array}{r} 5 \overline{) 15 \ 25 \ 45} \\ 3 \overline{) 3 \ 5 \ 9} \\ \underline{1 \ 5 \ 3} \end{array}$$

3-2 (1) 가능한 한 작은 정사각형을 만들려면 정사각형의 한 변의 길이는 15와 25의 최소공배수이어야 한다.
따라서 정사각형의 한 변의 길이는 $5 \times 3 \times 5 = 75$ (cm)
(2) 가로는 $75 \div 15 = 5$ (장), 세로는 $75 \div 25 = 3$ (장)이므로 필요한 종이의 수는 $5 \times 3 = 15$ (장)

$$\begin{array}{r} 5 \overline{) 15 \ 25} \\ \underline{3 \ 5} \end{array}$$

3-3 (1) 가능한 한 작은 정사각형을 만들려면 정사각형의 한 변의 길이는 14와 8의 최소공배수이어야 한다.
따라서 정사각형의 한 변의 길이는 $2 \times 7 \times 4 = 56$ (cm)
(2) 가로는 $56 \div 14 = 4$ (장), 세로는 $56 \div 8 = 7$ (장)이므로 필요한 색종이의 수는 $4 \times 7 = 28$ (장)

$$\begin{array}{r} 2 \overline{) 14 \ 8} \\ \underline{7 \ 4} \end{array}$$

4-2 10, 15의 어느 것으로 나누어도 나누어떨어지는 자연수는 10과 15의 공배수이다.
이러한 수 중 가장 작은 자연수는 10과 15의 최소공배수이므로 $5 \times 2 \times 3 = 30$

$$\begin{array}{r} 5 \overline{) 10 \ 15} \\ \underline{2 \ 3} \end{array}$$

4-3 5, 9의 어느 것으로 나누어도 나누어떨어지는 자연수는 5와 9의 공배수이다.
이러한 수 중 가장 작은 수는 5와 9의 최소공배수이므로 $5 \times 9 = 45$

5-2 $\frac{n}{20}, \frac{n}{32}$ 을 동시에 자연수로 만드는 자연수 n 의 값은 20과 32의 공배수이다.

이때 20과 32의 최소공배수가 $2 \times 2 \times 5 \times 8 = 160$ 이므로 구하는 n 의 값 중 가장 작은 수는 160이다.

$$\begin{array}{r} 2 \overline{) 20 \ 32} \\ 2 \overline{) 10 \ 16} \\ \underline{5 \ 8} \end{array}$$

5-3 $\frac{1}{27}, \frac{1}{36}$ 중 어느 것에 곱하여도 그 결과가 자연수가 되는 수는 27과 36의 공배수이다.

이때 27과 36의 최소공배수가 $3 \times 3 \times 3 \times 4 = 108$ 이므로 구하는 가장 작은 자연수는 108이다.

$$\begin{array}{r} 3 \overline{) 27 \ 36} \\ 3 \overline{) 9 \ 12} \\ \underline{3 \ 4} \end{array}$$

STEP 2

기본연산 집중연습 | 10~11

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1-1 30명	1-2 6명
1-3 오전 7시 36분	1-4 오전 8시 20분
2-1 24 cm	2-2 20개
2-3 45 cm	2-4 6장
3-1 15	3-2 8
3-3 20	3-4 45
4-1 1, 2, 3, 6	4-2 1, 2, 4, 8, 16
4-3 147	4-4 60

1-1 가능한 한 많은 학생들에게 똑같이 나누어 주려면 학생 수는 90, 120의 최대공약수이어야 한다.
따라서 구하는 학생 수는 $2 \times 3 \times 5 = 30$ (명)

$$\begin{array}{r} 2 \overline{) 90 \ 120} \\ 3 \overline{) 45 \ 60} \\ 5 \overline{) 15 \ 20} \\ \underline{3 \ 4} \end{array}$$

1-2 되도록 많은 학생들에게 똑같이 나누어 주려면 학생 수는 30, 18, 24의 최대 공약수이어야 한다.
따라서 구하는 학생 수는 $2 \times 3 = 6$ (명)

$$\begin{array}{r} 2 \overline{) 30 \ 18 \ 24} \\ 3 \overline{) 15 \ 9 \ 12} \\ 5 \ 3 \ 4 \end{array}$$

1-3 A, B 두 버스가 오전 7시 이후에 처음으로 다시 동시에 출발하는 시각은 9, 12의 최소 공배수인 $3 \times 3 \times 4 = 36$ (분) 후이다.
따라서 오전 7시 이후에 처음으로 다시 동시에 출발하는 시각은 오전 7시 36분이다.

$$\begin{array}{r} 3 \overline{) 9 \ 12} \\ 3 \ 4 \end{array}$$

1-4 세 버스가 오전 7시 이후에 처음으로 다시 동시에 출발하는 시각은 10, 16, 20의 최소공배수인 $2 \times 2 \times 5 \times 4 = 80$ (분) 후이다.
따라서 오전 7시 이후에 처음으로 다시 동시에 출발하는 시각은 오전 8시 20분이다.

$$\begin{array}{r} 2 \overline{) 10 \ 16 \ 20} \\ 2 \overline{) 5 \ 8 \ 10} \\ 5 \overline{) 5 \ 4 \ 5} \\ 1 \ 4 \ 1 \end{array}$$

2-1 가능한 한 큰 정사각형 모양의 타일을 붙이려면 타일의 한 변의 길이는 96, 120의 최대공약수이어야 한다.
따라서 타일의 한 변의 길이는 $2 \times 2 \times 2 \times 3 = 24$ (cm)

$$\begin{array}{r} 2 \overline{) 96 \ 120} \\ 2 \overline{) 48 \ 60} \\ 2 \overline{) 24 \ 30} \\ 3 \overline{) 12 \ 15} \\ 4 \ 5 \end{array}$$

2-2 가능한 한 큰 정사각형 모양의 타일을 붙이려면 타일의 한 변의 길이는 100, 80의 최대공약수이어야 한다.
따라서 타일의 한 변의 길이는 $2 \times 2 \times 5 = 20$ (cm)
이때 가로는 $100 \div 20 = 5$ (개), 세로는 $80 \div 20 = 4$ (개)이므로 구하는 타일의 개수는 $5 \times 4 = 20$ (개)

$$\begin{array}{r} 2 \overline{) 100 \ 80} \\ 2 \overline{) 50 \ 40} \\ 5 \overline{) 25 \ 20} \\ 5 \ 4 \end{array}$$

2-3 가능한 한 작은 정사각형을 만들려면 정사각형의 한 변의 길이는 9, 15의 최소공배수이어야 한다.
따라서 정사각형의 한 변의 길이는 $3 \times 3 \times 5 = 45$ (cm)

$$\begin{array}{r} 3 \overline{) 9 \ 15} \\ 3 \ 5 \end{array}$$

2-4 가능한 한 작은 정사각형을 만들려면 정사각형의 한 변의 길이는 12, 18의 최소공배수이어야 한다.
따라서 정사각형의 한 변의 길이는 $2 \times 3 \times 2 \times 3 = 36$ (cm)이다.
이때 가로는 $36 \div 12 = 3$ (장), 세로는 $36 \div 18 = 2$ (장)이므로 필요한 종이의 수는 $3 \times 2 = 6$ (장)

$$\begin{array}{r} 2 \overline{) 12 \ 18} \\ 3 \overline{) 6 \ 9} \\ 2 \ 3 \end{array}$$

3-1 어떤 자연수는 60과 45의 공약수이고, 이러한 수 중 가장 큰 수는 60과 45의 최대공약수이므로 $3 \times 5 = 15$

$$\begin{array}{r} 3 \overline{) 60 \ 45} \\ 5 \overline{) 20 \ 15} \\ 4 \ 3 \end{array}$$

3-2 어떤 자연수는 120과 88의 공약수이고, 이러한 수 중 가장 큰 수는 120과 88의 최대공약수이므로 $2 \times 2 \times 2 = 8$

$$\begin{array}{r} 2 \overline{) 120 \ 88} \\ 2 \overline{) 60 \ 44} \\ 2 \overline{) 30 \ 22} \\ 15 \ 11 \end{array}$$

3-3 어떤 자연수는 4와 10의 공배수이고, 이러한 수 중 가장 작은 수는 4와 10의 최소공배수이므로 $2 \times 2 \times 5 = 20$

$$\begin{array}{r} 2 \overline{) 4 \ 10} \\ 2 \ 5 \end{array}$$

3-4 어떤 자연수는 9와 15의 공배수이고, 이러한 수 중 가장 작은 수는 9와 15의 최소공배수이므로 $3 \times 3 \times 5 = 45$

$$\begin{array}{r} 3 \overline{) 9 \ 15} \\ 3 \ 5 \end{array}$$

4-1 $\frac{24}{n}, \frac{30}{n}$ 을 동시에 자연수로 만드는 n 의 값은 24와 30의 공약수이다.
24와 30의 최대공약수는 $2 \times 3 = 6$ 이므로 구하는 n 의 값은 6의 약수인 1, 2, 3, 6이다.

$$\begin{array}{r} 2 \overline{) 24 \ 30} \\ 3 \overline{) 12 \ 15} \\ 4 \ 5 \end{array}$$

4-2 $\frac{48}{n}, \frac{64}{n}$ 를 동시에 자연수로 만드는 n 의 값은 48과 64의 공약수이다.
48과 64의 최대공약수는 $2 \times 2 \times 2 \times 2 = 16$ 이므로 구하는 n 의 값은 16의 약수인 1, 2, 4, 8, 16이다.

$$\begin{array}{r} 2 \overline{) 48 \ 64} \\ 2 \overline{) 24 \ 32} \\ 2 \overline{) 12 \ 16} \\ 2 \overline{) 6 \ 8} \\ 3 \ 4 \end{array}$$

4-3 $\frac{n}{21}, \frac{n}{49}$ 을 동시에 자연수로 만드는 자연수 n 의 값은 21과 49의 공배수이다.
21과 49의 최소공배수는 $7 \times 3 \times 7 = 147$ 이므로 구하는 n 의 값 중 가장 작은 수는 147이다.

$$\begin{array}{r} 7 \overline{) 21 \ 49} \\ 3 \ 7 \end{array}$$

4-4 $\frac{n}{12}, \frac{n}{10}$ 을 동시에 자연수로 만드는 자연수 n 의 값은 12와 10의 공배수이다.
12와 10의 최소공배수는 $2 \times 6 \times 5 = 60$ 이므로 구하는 n 의 값 중 가장 작은 수는 60이다.

$$\begin{array}{r} 2 \overline{) 12 \ 10} \\ 6 \ 5 \end{array}$$

STEP 3

기본연산 테스트

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- 1 (1), (3), (5)
- 2 (1) 최대공약수 : 5, 최소공배수 : 120
(2) 최대공약수 : 4, 최소공배수 : 448
(3) 최대공약수 : 10, 최소공배수 : 180
(4) 최대공약수 : 6, 최소공배수 : 720
(5) 최대공약수 : 9, 최소공배수 : 540
(6) 최대공약수 : 21, 최소공배수 : 630
- 3 (1) 최대공약수 : $3^2 \times 5$, 최소공배수 : $2 \times 3^3 \times 5^2 \times 7$
(2) 최대공약수 : 2×3^2 , 최소공배수 : $2^2 \times 3^3 \times 5$
(3) 최대공약수 : $2^2 \times 5$, 최소공배수 : $2^3 \times 3 \times 5^2$
(4) 최대공약수 : $2^2 \times 5^3$, 최소공배수 : $2^3 \times 5^4 \times 7$
(5) 최대공약수 : 2, 최소공배수 : $2^2 \times 3^2 \times 5$
(6) 최대공약수 : $2^2 \times 3$, 최소공배수 : $2^3 \times 3^2 \times 5$
(7) 최대공약수 : $2 \times 3^2 \times 7$, 최소공배수 : $2^2 \times 3^3 \times 7^2$
- 4 36개 5 30 cm
- 6 오전 11시 7 15장
- 8 16 9 1, 2, 3, 6, 9, 18
- 10 63 11 390

- 4 가능한 한 많은 조를 편성하려면 조의 수는 108, 180의 최대공약수이어야 한다.
따라서 구하는 조의 수는
 $2 \times 2 \times 3 \times 3 = 36$ (개)
$$\begin{array}{r} 2 \overline{) 108 \ 180} \\ 2 \overline{) \ 54 \ 90} \\ 3 \overline{) \ 27 \ 45} \\ 3 \overline{) \ 9 \ 15} \\ \hline 3 \quad 5 \end{array}$$
- 5 가능한 한 큰 정사각형 모양의 색종이를 붙이려면 색종이의 한 변의 길이는 150, 120의 최대공약수이어야 한다.
따라서 색종이의 한 변의 길이는
 $2 \times 3 \times 5 = 30$ (cm)
$$\begin{array}{r} 2 \overline{) 150 \ 120} \\ 3 \overline{) \ 75 \ 60} \\ 5 \overline{) \ 25 \ 20} \\ \hline 5 \quad 4 \end{array}$$
- 6 두 사람이 오전 9시에 같은 곳에서 동시에 출발한 후 처음으로 다시 출발점에서 만나는 시각은 24와 30의 최소공배수인
 $2 \times 3 \times 4 \times 5 = 120$ (분) 후이다.
따라서 오전 9시 이후에 처음으로 다시 출발점에서 만나는 시각은 오전 11시이다.
$$\begin{array}{r} 2 \overline{) 24 \ 30} \\ 3 \overline{) 12 \ 15} \\ \hline 4 \quad 5 \end{array}$$

- 7 가능한 한 작은 정사각형을 만들려면 정사각형의 한 변의 길이는 20, 12의 최소공배수이어야 한다.
따라서 정사각형의 한 변의 길이는
 $2 \times 2 \times 5 \times 3 = 60$ (cm)이다.
이때 가로는 $60 \div 20 = 3$ (장), 세로는 $60 \div 12 = 5$ (장)이므로 필요한 색종이의 수는 $3 \times 5 = 15$ (장)
$$\begin{array}{r} 2 \overline{) 20 \ 12} \\ 2 \overline{) 10 \ 6} \\ \hline 5 \quad 3 \end{array}$$

- 8 어떤 자연수는 32와 80의 공약수이고, 이러한 수 중 가장 큰 수는 32와 80의 최대공약수이므로
 $2 \times 2 \times 2 \times 2 = 16$
$$\begin{array}{r} 2 \overline{) 32 \ 80} \\ 2 \overline{) 16 \ 40} \\ 2 \overline{) \ 8 \ 20} \\ 2 \overline{) \ 4 \ 10} \\ \hline 2 \quad 5 \end{array}$$

- 9 $\frac{54}{n}, \frac{72}{n}$ 를 동시에 자연수가 되도록 하는 n 의 값은 54와 72의 공약수이다.
54와 72의 최대공약수는
 $2 \times 3 \times 3 = 18$ 이므로 구하는 n 의 값은 18의 약수인 1, 2, 3, 6, 9, 18이다.
$$\begin{array}{r} 2 \overline{) 54 \ 72} \\ 3 \overline{) 27 \ 36} \\ 3 \overline{) \ 9 \ 12} \\ \hline 3 \quad 4 \end{array}$$

- 10 9, 21의 어느 것으로 나누어도 나누어떨어지는 자연수는 9와 21의 공배수이다.
이러한 수 중 가장 작은 수는 9와 21의 최소공배수이므로
 $3 \times 3 \times 7 = 63$
$$\begin{array}{r} 3 \overline{) 9 \ 21} \\ \hline 3 \quad 7 \end{array}$$

- 11 $\frac{1}{30}, \frac{1}{78}$ 중 어느 것에 곱하여도 그 결과가 자연수가 되는 수는 30과 78의 공배수이다.
30과 78의 최소공배수는 $2 \times 3 \times 5 \times 13 = 390$ 이므로 구하는 가장 작은 자연수는 390이다.
$$\begin{array}{r} 2 \overline{) 30 \ 78} \\ 3 \overline{) 15 \ 39} \\ \hline 5 \quad 13 \end{array}$$

3

정수와 유리수

STEP 1

01 양수와 음수

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- | | |
|--------------------|-------------|
| 1-1 -300원 | 1-2 +50000원 |
| 2-1 +10 °C | 2-2 +5점 |
| 3-1 -2시간 | 3-2 -50명 |
| 4-1 +4 | 4-2 -2 |
| 5-1 $+\frac{1}{2}$ | 5-2 -5 |

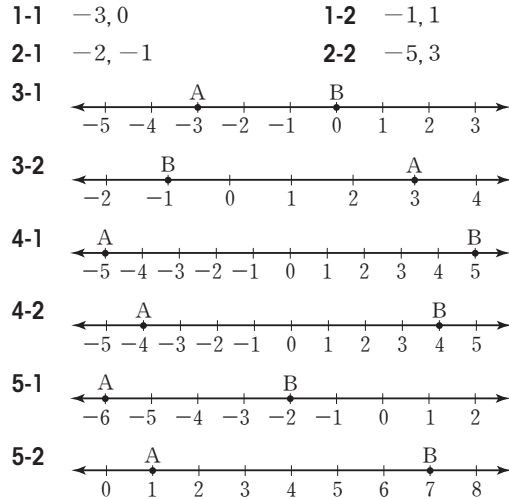
02 정수

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- 1-1 (1) +11, 6, +50, $\frac{6}{2}$ (2) $-\frac{14}{2}$
 (3) +11, 6, +50, $\frac{6}{2}$ (4) +11, 0, 6, $-\frac{14}{2}$, +50, $\frac{6}{2}$
- 1-2 (1) $\frac{12}{3}$ (2) -3, -100 (3) $\frac{12}{3}$ (4) -3, 0, -100, $\frac{12}{3}$
- 2-1 $-2, \frac{4}{2}$
- 2-2 $-\frac{15}{3}, 0, 7, -1$
- 1-1 $-\frac{14}{2} = -7, \frac{6}{2} = 3$ 이므로 정수이다.
- 1-2 $\frac{12}{3} = 4$ 이므로 정수이다.
- 2-1 $\frac{4}{2} = 2$ 이므로 정수는 -2, $\frac{4}{2}$ 이다.
- 2-2 $-\frac{15}{3} = -5$ 이므로 정수는 $-\frac{15}{3}, 0, 7, -1$ 이다.

03 정수를 수직선 위에 나타내기

p. 58



04 유리수

p. 59 ~ p. 60

- 1-1 (1) $1, \frac{6}{2}, 3^2$ (2) -5 (3) $1, \frac{6}{2}, 3^2$
 (4) $1, 0, -5, \frac{6}{2}, 3^2$ (5) $1, +\frac{2}{5}, \frac{6}{2}, +1.5, 3^2$
 (6) -2.9, -5 (7) $-2.9, +\frac{2}{5}, +1.5$ (8) 0
- 1-2 (1) +2, 3 (2) $-8, -\frac{18}{3}$ (3) +2, 3
 (4) +2, 3, $-8, -\frac{18}{3}, 0$ (5) $+2, 4.5, \frac{1}{2}, 3, +\frac{4}{7}$
 (6) $-8, -\frac{18}{3}$ (7) $4.5, \frac{1}{2}, +\frac{4}{7}$ (8) 0
- 2 6명

1-1 $\frac{6}{2} = 3, 3^2 = 9$

1-2 $-\frac{18}{3} = -6$

- 2 지효 : 0은 정수이다.
 지민 : 유리수는 양의 유리수, 0, 음의 유리수로 이루어져 있다.
 채영 : $\frac{12}{4} = 3$ 이므로 정수이다.
 찬열 : 음의 정수는 음의 부호 -를 생략하여 나타낼 수 없다.
 예린 : 자연수가 아닌 정수는 0, 음의 정수이다.
 따라서 옳은 것을 말한 학생은 나연, 정국, 나나, 채영, 수호, 선재의 6명이다.

05 유리수를 수직선 위에 나타내기

p. 61 ~ p. 62

1-1 ① $-\frac{7}{4}$ ② $-\frac{1}{2}$ ③ $+\frac{2}{3}$

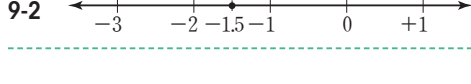
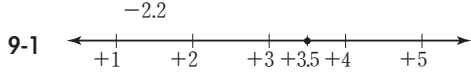
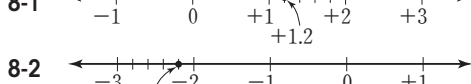
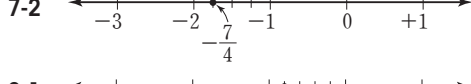
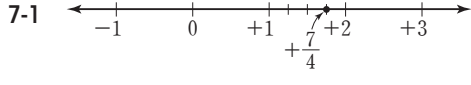
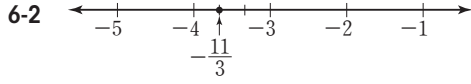
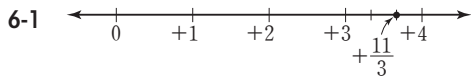
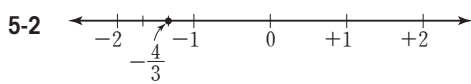
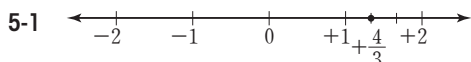
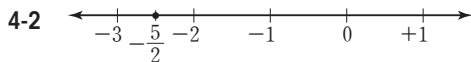
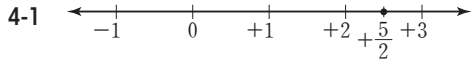
1-2 ① $-\frac{3}{2}$ ② $+\frac{1}{2}$ ③ $+\frac{4}{3}$

2-1 A : $-\frac{5}{2}$, B : $\frac{5}{3}$, C : $\frac{7}{2}$

2-2 A : $-\frac{15}{4}$, B : -2 , C : $-\frac{2}{3}$

3-1 A : $-\frac{7}{3}$, B : 0, C : $\frac{3}{4}$

3-2 A : $-\frac{5}{3}$, B : $-\frac{1}{4}$, C : $\frac{7}{3}$



STEP 2

기본연산 집중연습 | 01~05

p. 63 ~ p. 64

1-1 -9°C

1-2 $+10000\text{원}$

1-3 $+30\%, -20\%$

1-4 $+1950\text{ m}, -300\text{ m}$

1-5 $+2, -3$

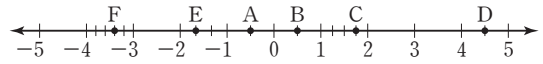
1-6 $+\frac{3}{2}, -\frac{3}{2}$

2 시, 나, 브, 로

3 풀이 참조

4 A : $-\frac{9}{2}$, B : -2 , C : $-\frac{1}{3}$, D : $\frac{8}{3}$, E : $\frac{23}{5}$

5



시나브로

2 예 : 정수는 양의 정수, 0, 음의 정수로 이루어져 있다.

그 : $-\frac{8}{4} = -2$ 이므로 정수이다.

따라서 옳은 설명이 적혀 있는 글자는 시, 나, 브, 로이다.

3

수	-5	+3	0	1.2
수의 분류				
양수	×	○	×	○
음수	○	×	×	×
자연수	×	○	×	×
정수	○	○	○	×
정수가 아닌 유리수	×	×	×	○
유리수	○	○	○	○

수	$-\frac{10}{2}$	$+\frac{1}{3}$	$+\frac{9}{3}$	-8.5
수의 분류				
양수	×	○	○	×
음수	○	×	×	○
자연수	×	×	○	×
정수	○	×	○	×
정수가 아닌 유리수	×	○	×	○
유리수	○	○	○	○

STEP 1

06 절댓값의 뜻

p. 65

1-1 5, 5, 5, 5

1-2 $\frac{4}{3}, \frac{4}{3}, \frac{4}{3}, \frac{4}{3}$

2-1 4

2-2 7

3-1 0

3-2 $\frac{3}{2}$

4-1 1

4-2 $\frac{1}{5}$

5-1 0, 3

5-2 $\frac{3}{4}$

07 절댓값의 성질

p. 66 ~ p. 67

1-1 $-4, 4, -4, 4, -4, 4$

1-2 $-\frac{3}{2}, \frac{3}{2}, -\frac{3}{2}, \frac{3}{2}, -\frac{3}{2}, \frac{3}{2}$

2-1 0

2-2 $-7, 7$

- 3-1 -4
 4-1 $-\frac{9}{4}, \frac{9}{4}$
 5-1 $-6, 6$
 6-1 \bigcirc
 7-1 \times
 8-1 \times
 9-1 $4, 3, 6, 5, 7, -6, +5, -4$
 9-2 $-9, -5, +2, +1, 0$
 10-1 $-5, 4, -\frac{2}{3}, -\frac{5}{8}, \frac{1}{2}$
 10-2 $-4.9, 2.7, -\frac{5}{2}, -1, \frac{3}{4}$

6-2 절댓값이 9인 수는 $-9, 9$ 이다.

7-1 절댓값이 가장 작은 수는 0 이다.

7-2 음수 중 절댓값이 가장 작은 수는 알 수 없다.
 음의 정수 중 절댓값이 가장 작은 수는 -1 이다.

8-1 모든 유리수의 절댓값은 0 또는 양수이다.

STEP 2

기본연산 집중연습 | 06~07

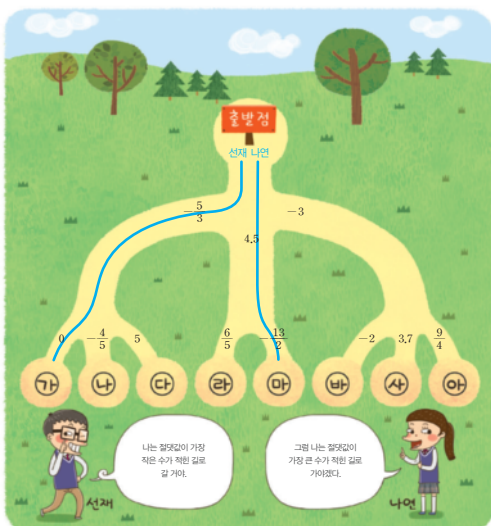
p. 68 ~ p. 69

- 1-1 6
 1-3 6
 1-5 0
 1-7 $-6, 6$
 1-9 -5
 1-2 $-6, 6$
 1-4 6
 1-6 6
 1-8 5
 1-10 $\frac{3}{8}$

2 선재 : ㉠, 나연 : ㉡

나연, 채영, 지민

2



STEP 1

08 분수, 소수의 대소 관계

p. 70

- 1-1 $<$
 2-1 $>$
 3-1 $>$
 4-1 $<$
 5-1 $<$
 1-2 $>$
 2-2 $>$
 3-2 $<$
 4-2 $<$
 5-2 $>$

09 두 수의 대소 관계

p. 71 ~ p. 72

- 1-1 $<$
 2-1 $>$
 3-1 $<$
 4-1 $<$
 5-1 $>$
 6-1 $12, 12, >, >$
 7-1 $<$
 8-1 $<$
 9-1 $<$
 10-1 $>$
 11-1 $>$
 12-1 $>$
 1-2 $>$
 2-2 $<$
 3-2 $>$
 4-2 $>$
 5-2 $<$
 6-2 $>$
 7-2 $>$
 8-2 $>$
 9-2 $<$
 10-2 $<$
 11-2 $<$
 12-2 $>$

$$6-2 \left(+\frac{1}{2}, +\frac{1}{3} \right) \Rightarrow \left(+\frac{3}{6}, +\frac{2}{6} \right) \\ \Rightarrow +\frac{3}{6} > +\frac{2}{6} \Rightarrow +\frac{1}{2} > +\frac{1}{3}$$

$$7-2 \left(-\frac{3}{4}, -\frac{4}{5} \right) \Rightarrow \left(-\frac{15}{20}, -\frac{16}{20} \right) \\ \Rightarrow -\frac{15}{20} > -\frac{16}{20} \Rightarrow -\frac{3}{4} > -\frac{4}{5}$$

$$8-1 \text{ 양수는 음수보다 크므로 } -\frac{1}{5} < +\frac{1}{2}$$

$$8-2 \text{ 양수는 음수보다 크므로 } +\frac{3}{2} > -\frac{4}{3}$$

$$9-1 \left(\left| -\frac{4}{7} \right|, \left| -\frac{5}{8} \right| \right) \Rightarrow \left(\frac{4}{7}, \frac{5}{8} \right) \Rightarrow \left(\frac{32}{56}, \frac{35}{56} \right) \\ \Rightarrow \frac{32}{56} < \frac{35}{56} \Rightarrow \left| -\frac{4}{7} \right| < \left| -\frac{5}{8} \right|$$

$$9-2 \left(\left| -\frac{8}{7} \right|, \left| -\frac{6}{5} \right| \right) \Rightarrow \left(\frac{8}{7}, \frac{6}{5} \right) \Rightarrow \left(\frac{40}{35}, \frac{42}{35} \right) \\ \Rightarrow \frac{40}{35} < \frac{42}{35} \Rightarrow \left| -\frac{8}{7} \right| < \left| -\frac{6}{5} \right|$$

$$10-1 \left(\frac{3}{4}, 0.7 \right) \Rightarrow (0.75, 0.7) \Rightarrow 0.75 > 0.7 \Rightarrow \frac{3}{4} > 0.7$$

$$10-2 \left(-\frac{5}{9}, -0.3\right) \Rightarrow \left(-\frac{5}{9}, -\frac{3}{10}\right) \Rightarrow \left(-\frac{50}{90}, -\frac{27}{90}\right)$$

$$\Rightarrow -\frac{50}{90} < -\frac{27}{90} \Rightarrow -\frac{5}{9} < -0.3$$

$$11-1 \left|-\frac{2}{3}\right| = \frac{2}{3} \text{이므로 } \left(\frac{2}{3}, \frac{1}{4}\right) \Rightarrow \left(\frac{8}{12}, \frac{3}{12}\right)$$

$$\Rightarrow \frac{8}{12} > \frac{3}{12} \Rightarrow \left|-\frac{2}{3}\right| > \frac{1}{4}$$

$$11-2 |-3.5| = 3.5 \text{이므로 } \left(\frac{10}{3}, 3.5\right) \Rightarrow \left(\frac{10}{3}, \frac{7}{2}\right)$$

$$\Rightarrow \left(\frac{20}{6}, \frac{21}{6}\right) \Rightarrow \frac{20}{6} < \frac{21}{6} \Rightarrow \frac{10}{3} < |-3.5|$$

$$12-1 \left|-\frac{5}{7}\right| = \frac{5}{7}, |0| = 0 \text{이므로 } \left|-\frac{5}{7}\right| > |0|$$

$$12-2 \left|-\frac{5}{6}\right| = \frac{5}{6} \text{이므로 } \left(\frac{5}{6}, \frac{2}{3}\right) \Rightarrow \left(\frac{5}{6}, \frac{4}{6}\right)$$

$$\Rightarrow \frac{5}{6} > \frac{4}{6} \Rightarrow \left|-\frac{5}{6}\right| > \frac{2}{3}$$

10 세 수 이상의 대소 관계

p. 73

- | | |
|--|-------------------------------------|
| 1-1 0, -3 | 1-2 +1, 0, -7, -8 |
| 2-1 $\frac{1}{3}, 0, -\frac{2}{3}$ | 2-2 $0, -\frac{2}{3}, -\frac{3}{4}$ |
| 3-1 6, 5, 2, -3, -7 | |
| 3-2 $6, \frac{7}{2}, -\frac{1}{5}, -\frac{2}{3}, -1$ | |
| 4-1 $1.5, +1, -\frac{4}{5}, -\frac{5}{3}, -2$ | |
| 4-2 $7, +4.1, \frac{3}{7}, -\frac{1}{9}, -3$ | |

11 이상, 이하, 초과, 미만

p. 74

- | | |
|-------------------------------|---------------------------|
| 1-1 3, 4, 5, 8 | 1-2 $8, \frac{17}{2}, 11$ |
| 2-1 5, 7, $10\frac{1}{2}, 15$ | 2-2 $1, 5\frac{3}{8}, 40$ |
| 3-1 9, 6, 11, 20 | 3-2 26, 50 |
| 4-1 11, 18, $19\frac{2}{5}$ | 4-2 58, 41, 2 |

12 부등호로 나타내기

p. 75 ~ p. 76

- | | |
|---------------|---------------|
| 1-1 \leq | 1-2 \geq |
| 2-1 \geq | 2-2 $<$ |
| 3-1 $<, \leq$ | 3-2 $\leq, <$ |
| 4-1 $>$ | 4-2 $x < 3$ |

$$5-1 x \leq -7$$

$$5-2 x < \frac{1}{2}$$

$$6-1 x \geq -2$$

$$6-2 x \leq -3$$

$$7-1 -1 < x < 5$$

$$7-2 -8 \leq x \leq 6$$

$$8-1 -1 \leq x \leq 5$$

$$8-2 \frac{1}{3} \leq x < \frac{9}{4}$$

$$9-1 -2.7 < x \leq 2$$

$$9-2 -3 \leq x < \frac{2}{5}$$

$$10-1 -2 \leq x < 3$$

$$10-2 -0.7 < x \leq 4$$

13 두 수 사이에 있는 정수 구하기

p. 77

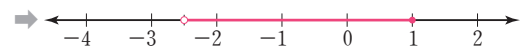
- | | |
|------------------------|---------------------|
| 1-1 -1 | 1-2 -2, -1, 0, 1, 2 |
| 2-1 -2, -1, 0, 1 | 2-2 -2, -1, 0, 1 |
| 3-1 -1, 0, 1, 2 | 3-2 -2, -1, 0, 1 |
| 4-1 -5, -4, -3, -2, -1 | 4-2 3, 4, 5, 6, 7 |

$$1-2 -\frac{11}{5} \leq x < 3$$



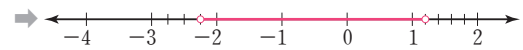
→ x의 값 중 정수는 -2, -1, 0, 1, 2이다.

$$2-1 -\frac{5}{2} < x \leq 1$$



→ x의 값 중 정수는 -2, -1, 0, 1이다.

$$2-2 -\frac{9}{4} < x < \frac{6}{5}$$



→ x의 값 중 정수는 -2, -1, 0, 1이다.

$$3-1 -1 \text{ 이상 } 2 \text{ 이하인 정수}$$



→ -1, 0, 1, 2

$$3-2 -3 \text{ 초과 } \frac{5}{4} \text{ 이하인 정수}$$



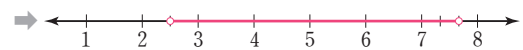
→ -2, -1, 0, 1

$$4-1 -\frac{16}{3} \text{ 과 } -\frac{1}{2} \text{ 사이에 있는 정수}$$



→ -5, -4, -3, -2, -1

$$4-2 2.5 \text{ 와 } \frac{23}{3} \text{ 사이에 있는 정수}$$



→ 3, 4, 5, 6, 7

STEP 2

기본연산 집중연습 | 08~13

p. 78 ~ p. 79

1 볼펜

2 책

3 ④

4-1 (1) -3 (2) $\frac{5}{3}$ (3) 0 (4) $+1$

4-2 (1) $-\frac{8}{3}$ (2) $+\frac{9}{4}$ (3) $-\frac{8}{3}$ (4) -1

5-1 $2 \leq x \leq 5$

5-2 $-9 \leq x < 4$

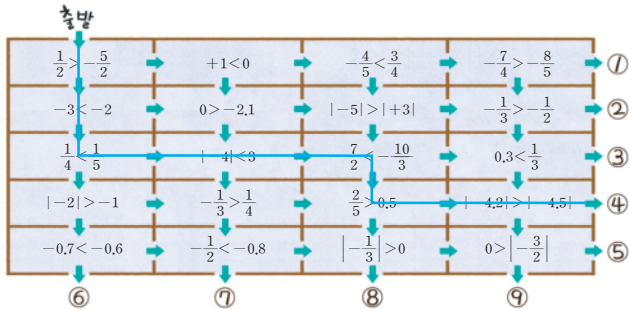
5-3 $-3 < x \leq 7$

5-4 $-2 \leq x \leq 7$

5-5 $1.8 < x \leq \frac{21}{5}$

5-6 $-\frac{1}{2} < x \leq \frac{3}{2}$

3



STEP 3

기본연산 테스트

p. 80 ~ p. 81

1 (1) -30% (2) $+10$ 점 (3) $+5000$ 원 (4) -3

2 (1) $3.5, +10, \frac{11}{4}$ (2) $-\frac{2}{7}, -\frac{10}{5}$ (3) $+10, 0, -\frac{10}{5}$

(4) $-\frac{2}{7}, 3.5, \frac{11}{4}$ (5) $-\frac{2}{7}, 3.5, +10, 0, -\frac{10}{5}, \frac{11}{4}$

3 A : $-\frac{7}{4}$, B : $-\frac{1}{2}$, C : 0 , D : $\frac{4}{3}$

4 (1) 2 (2) $\frac{1}{2}$ (3) $-11, 11$ (4) -5

(5) $-3, 3$ (6) 7 (7) $\frac{2}{3}$ (8) 0

5 $0, \frac{3}{5}, -1, \frac{5}{2}, -8$

6 (1) \times (2) \times (3) \times (4) \bigcirc (5) \times

7 (1) $<$ (2) $>$ (3) $<$ (4) $>$ (5) $<$ (6) $>$

8 (1) $\frac{1}{3}, 0, -1$ (2) $-\frac{1}{4}, -\frac{1}{3}, -\frac{1}{2}$

(3) $\frac{5}{3}, +1, 0, -\frac{1}{2}, -3$

9 (1) $-3 \leq x < 1$ (2) $5 < x \leq 10$ (3) $-1 \leq x \leq \frac{11}{6}$

10 (1) $-3, -2, -1, 0, 1, 2$ (2) $-2, -1, 0, 1$

5 $|-8|=8, |\frac{5}{2}|=\frac{5}{2}, |0|=0, |-1|=1,$

$|\frac{3}{5}|=\frac{3}{5}$ 이므로 절댓값이 작은 수부터 차례로 나열하면

$0, \frac{3}{5}, -1, \frac{5}{2}, -8$ 이다.

6 (1) 절댓값이 클수록 수직선에서 그 수를 나타내는 점은 원점에서 멀다.

(2) 모든 유리수의 절댓값은 0 또는 양수이다.

(3) $|-4|=4, |+4|=4$ 이므로 -4 와 $+4$ 의 절댓값의 합은 $4+4=8$

(5) 원점으로부터 거리가 5인 수는 $-5, 5$ 이다.

8 (1) (음수) $<0<$ (양수)이므로 $0, -1, \frac{1}{3}$ 을 큰 수부터 차례로 나열하면 $\frac{1}{3}, 0, -1$ 이다.

(2) 음수끼리는 절댓값이 큰 수가 작다.

이때 $|\frac{1}{2}|=\frac{1}{2}, |-\frac{1}{3}|=\frac{1}{3}, |-\frac{1}{4}|=\frac{1}{4}$ 이고

$\frac{1}{2}=\frac{6}{12}, \frac{1}{3}=\frac{4}{12}, \frac{1}{4}=\frac{3}{12}$ 이므로

$\frac{1}{2} > \frac{1}{3} > \frac{1}{4}$ 이다.

따라서 $-\frac{1}{2}, -\frac{1}{3}, -\frac{1}{4}$ 을 큰 수부터 차례로 나열하면 $-\frac{1}{4}, -\frac{1}{3}, -\frac{1}{2}$ 이다.

(3) $+1, 0, -3, -\frac{1}{2}, \frac{5}{3}$ 에서

음수는 $-3, -\frac{1}{2}$ 이고 양수는 $+1, \frac{5}{3}$ 이다.

음수끼리는 절댓값이 큰 수가 작으므로 $-3 < -\frac{1}{2}$

양수끼리는 절댓값이 큰 수가 크므로 $+1 < \frac{5}{3}$

따라서 큰 수부터 차례로 나열하면

$\frac{5}{3}, +1, 0, -\frac{1}{2}, -3$ 이다.

10 (1) 수직선 위에 -3 과 $\frac{7}{3}=2\frac{1}{3}$ 을 나타내면 다음과 같다.



따라서 $-3 \leq x < \frac{7}{3}$ 을 만족하는 x 의 값 중 정수는 $-3, -2, -1, 0, 1, 2$ 이다.

(2) 수직선 위에 $-\frac{11}{5}=-2\frac{1}{5}$ 과 2 를 나타내면 다음과 같다.



따라서 $-\frac{11}{5} < x < 2$ 를 만족하는 x 의 값 중 정수는 $-2, -1, 0, 1$ 이다.

4

정수와 유리수의 계산

STEP 1

01 정수의 덧셈(1) : 부호가 같은 수

p. 84 ~ p. 85

1-1	+3, +4	1-2	-3, -4
2-1	+7	2-2	-19
3-1	+9	3-2	-14
4-1	+12	4-2	-11
5-1	+23	5-2	-21
6-1	+9	6-2	-12
7-1	+23	7-2	-24
8-1	+30	8-2	-30
9-1	+34	9-2	-34
10-1	+43	10-2	-52
11-1	+102	11-2	-104
12-1	+220	12-2	-181

02 정수의 덧셈(2) : 부호가 다른 수

p. 86 ~ p. 87

1-1	+4, +4	1-2	-4, -4
2-1	-5	2-2	+2
3-1	+4	3-2	-1
4-1	+8	4-2	+3
5-1	-3	5-2	-9
6-1	+5	6-2	-5
7-1	-5	7-2	+20
8-1	+90	8-2	-72
9-1	0	9-2	0
10-1	0	10-2	0
11-1	-4	11-2	+10
12-1	+9	12-2	-37

STEP 2

기본연산 집중연습 | 01~02

p. 88

1-1	+9	1-2	-19
1-3	+4	1-4	-13
1-5	+2	1-6	-6
1-7	-22	1-8	-9
1-9	0		

$$\begin{aligned} 1-1 \quad \ominus &= (+2) + (+1) = +3 \\ \oslash &= (+1) + (+5) = +6 \\ \oplus &= \ominus + \oslash = (+3) + (+6) = +9 \end{aligned}$$

$$\begin{aligned} 1-2 \quad \ominus &= (-9) + (-3) = -12 \\ \oslash &= (-3) + (-4) = -7 \\ \oplus &= \ominus + \oslash = (-12) + (-7) = -19 \end{aligned}$$

$$\begin{aligned} 1-3 \quad \ominus &= (-5) + (+1) = -4 \\ \oslash &= (+1) + (+7) = +8 \\ \oplus &= \ominus + \oslash = (-4) + (+8) = +4 \end{aligned}$$

$$\begin{aligned} 1-4 \quad \ominus &= (+3) + (-6) = -3 \\ \oslash &= (-6) + (-4) = -10 \\ \oplus &= \ominus + \oslash = (-3) + (-10) = -13 \end{aligned}$$

$$\begin{aligned} 1-5 \quad \ominus &= (+11) + 0 = +11 \\ \oslash &= 0 + (-9) = -9 \\ \oplus &= \ominus + \oslash = (+11) + (-9) = +2 \end{aligned}$$

$$\begin{aligned} 1-6 \quad \ominus &= (-2) + (+2) = 0 \\ \oslash &= (+2) + (-8) = -6 \\ \oplus &= \ominus + \oslash = 0 + (-6) = -6 \end{aligned}$$

$$\begin{aligned} 1-7 \quad \ominus &= (-11) + (-9) = -20 \\ \oslash &= (-9) + (+7) = -2 \\ \oplus &= \ominus + \oslash = (-20) + (-2) = -22 \end{aligned}$$

$$\begin{aligned} 1-8 \quad \ominus &= (-22) + (+13) = -9 \\ \oslash &= (+13) + (-13) = 0 \\ \oplus &= \ominus + \oslash = (-9) + 0 = -9 \end{aligned}$$

$$\begin{aligned} 1-9 \quad \ominus &= (-6) + 0 = -6 \\ \oslash &= 0 + (+6) = +6 \\ \oplus &= \ominus + \oslash = (-6) + (+6) = 0 \end{aligned}$$

STEP 1

03 분수의 덧셈

p. 89

1-1	4, 2, 6	1-2	$\frac{5}{4}$
2-1	$\frac{7}{3}$	2-2	$\frac{7}{3}$
3-1	4, 3, 8, 15, 23	3-2	$\frac{25}{36}$
4-1	$\frac{38}{63}$	4-2	$\frac{23}{45}$
5-1	$\frac{13}{15}$	5-2	$\frac{23}{56}$

$$1-2 \quad \frac{7}{8} + \frac{3}{8} = \frac{10}{8} = \frac{5}{4}$$

$$2-1 \quad \frac{2}{3} + \frac{5}{3} = \frac{7}{3}$$

$$2-2 \quad \frac{1}{6} + \frac{13}{6} = \frac{14}{6} = \frac{7}{3}$$

$$3-2 \quad \frac{5}{18} + \frac{5}{12} = \frac{10}{36} + \frac{15}{36} = \frac{25}{36}$$

$$4-1 \quad \frac{8}{21} + \frac{2}{9} = \frac{24}{63} + \frac{14}{63} = \frac{38}{63}$$

$$4-2 \quad \frac{4}{9} + \frac{1}{15} = \frac{20}{45} + \frac{3}{45} = \frac{23}{45}$$

$$5-1 \quad \frac{1}{6} + \frac{7}{10} = \frac{5}{30} + \frac{21}{30} = \frac{26}{30} = \frac{13}{15}$$

$$5-2 \quad \frac{2}{7} + \frac{1}{8} = \frac{16}{56} + \frac{7}{56} = \frac{23}{56}$$

$$2-2 \quad \left(-\frac{3}{14}\right) + \left(-\frac{9}{14}\right) = -\frac{12}{14} = -\frac{6}{7}$$

$$3-1 \quad \left(+\frac{2}{3}\right) + \left(+\frac{5}{6}\right) = \left(+\frac{4}{6}\right) + \left(+\frac{5}{6}\right) = +\frac{9}{6} = +\frac{3}{2}$$

$$3-2 \quad \left(-\frac{7}{2}\right) + \left(-\frac{13}{4}\right) = \left(-\frac{14}{4}\right) + \left(-\frac{13}{4}\right) = -\frac{27}{4}$$

$$4-1 \quad \left(+\frac{3}{4}\right) + \left(+\frac{1}{10}\right) = \left(+\frac{15}{20}\right) + \left(+\frac{2}{20}\right) = +\frac{17}{20}$$

$$4-2 \quad \left(-\frac{1}{7}\right) + \left(-\frac{4}{3}\right) = \left(-\frac{3}{21}\right) + \left(-\frac{28}{21}\right) = -\frac{31}{21}$$

$$5-1 \quad \left(+\frac{5}{6}\right) + \left(+\frac{1}{10}\right) = \left(+\frac{25}{30}\right) + \left(+\frac{3}{30}\right) \\ = +\frac{28}{30} = +\frac{14}{15}$$

$$5-2 \quad \left(-\frac{4}{7}\right) + \left(-\frac{3}{8}\right) = \left(-\frac{32}{56}\right) + \left(-\frac{21}{56}\right) = -\frac{53}{56}$$

$$6-1 \quad \left(+\frac{5}{3}\right) + \left(+\frac{3}{5}\right) = \left(+\frac{25}{15}\right) + \left(+\frac{9}{15}\right) = +\frac{34}{15}$$

$$6-2 \quad \left(-\frac{5}{8}\right) + \left(-\frac{4}{5}\right) = \left(-\frac{25}{40}\right) + \left(-\frac{32}{40}\right) = -\frac{57}{40}$$

$$7-1 \quad \left(+\frac{1}{6}\right) + \left(+\frac{7}{8}\right) = \left(+\frac{4}{24}\right) + \left(+\frac{21}{24}\right) = +\frac{25}{24}$$

$$7-2 \quad \left(-\frac{3}{4}\right) + \left(-\frac{9}{14}\right) = \left(-\frac{21}{28}\right) + \left(-\frac{18}{28}\right) = -\frac{39}{28}$$

$$8-1 \quad \left(+\frac{4}{9}\right) + \left(+\frac{7}{12}\right) = \left(+\frac{16}{36}\right) + \left(+\frac{21}{36}\right) = +\frac{37}{36}$$

$$8-2 \quad \left(-\frac{5}{7}\right) + \left(-\frac{3}{8}\right) = \left(-\frac{40}{56}\right) + \left(-\frac{21}{56}\right) = -\frac{61}{56}$$

$$12-1 \quad \left(+\frac{2}{5}\right) + (+8.4) = (+0.4) + (+8.4) = +8.8$$

$$12-2 \quad (-6.3) + \left(-\frac{7}{10}\right) = \left(-\frac{63}{10}\right) + \left(-\frac{7}{10}\right) \\ = -\frac{70}{10} = -7$$

04 유리수의 덧셈(1) : 부호가 같은 수

p. 90 ~ p. 91

$$1-1 \quad 8, 15, +, 8, 15, + \frac{23}{12}$$

$$1-2 \quad 4, -, 4, -\frac{11}{6}$$

$$2-1 \quad +\frac{16}{5}$$

$$2-2 \quad -\frac{6}{7}$$

$$3-1 \quad +\frac{3}{2}$$

$$3-2 \quad -\frac{27}{4}$$

$$4-1 \quad +\frac{17}{20}$$

$$4-2 \quad -\frac{31}{21}$$

$$5-1 \quad +\frac{14}{15}$$

$$5-2 \quad -\frac{53}{56}$$

$$6-1 \quad +\frac{34}{15}$$

$$6-2 \quad -\frac{57}{40}$$

$$7-1 \quad +\frac{25}{24}$$

$$7-2 \quad -\frac{39}{28}$$

$$8-1 \quad +\frac{37}{36}$$

$$8-2 \quad -\frac{61}{56}$$

$$9-1 \quad +4.9$$

$$9-2 \quad -1.5$$

$$10-1 \quad +1.2$$

$$10-2 \quad -8.1$$

$$11-1 \quad +8 \quad \text{연구} \quad 4.5, 4.5, +8$$

$$11-2 \quad -\frac{3}{2} \quad \text{연구} \quad \frac{1}{4}, \frac{1}{4}, -\frac{6}{4}$$

$$12-1 \quad +8.8$$

$$12-2 \quad -7$$

$$2-1 \quad \left(+\frac{4}{5}\right) + \left(+\frac{12}{5}\right) = +\frac{16}{5}$$

05 유리수의 덧셈(2) : 부호가 다른 수

p. 92 ~ p. 93

$$1-1 \quad 4, 3, -, 4, 3, -\frac{1}{6}$$

$$1-2 \quad -\frac{9}{4}$$

$$2-1 \quad +\frac{1}{5}$$

$$2-2 \quad -\frac{5}{2}$$

$$3-1 \quad +\frac{1}{4}$$

$$3-2 \quad -\frac{1}{10}$$

$$4-1 \quad +\frac{8}{5}$$

$$4-2 \quad -\frac{7}{3}$$

$$5-1 \quad -\frac{7}{12}$$

$$5-2 \quad -\frac{11}{56}$$

$$6-1 \quad +\frac{3}{10}$$

$$6-2 \quad -\frac{7}{12}$$

$$7-1 \quad +\frac{1}{15}$$

$$7-2 \quad +\frac{25}{24}$$

$$8-1 \quad +\frac{1}{6}$$

$$8-2 \quad +\frac{11}{24}$$

$$9-1 \quad -3.4$$

$$9-2 \quad -3.7$$

$$10-1 \quad -2.3$$

$$10-2 \quad -4.9$$

$$11-1 \quad +\frac{3}{4}$$

$$11-2 \quad +2$$

$$12-1 \quad +5$$

$$12-2 \quad +\frac{37}{15}$$

$$1-2 \quad \left(+\frac{1}{4}\right) + \left(-\frac{10}{4}\right) = -\left(\frac{10}{4} - \frac{1}{4}\right) = -\frac{9}{4}$$

$$2-1 \quad \left(-\frac{3}{5}\right) + \left(+\frac{4}{5}\right) = +\left(\frac{4}{5} - \frac{3}{5}\right) = +\frac{1}{5}$$

$$2-2 \quad \left(+\frac{1}{4}\right) + \left(-\frac{11}{4}\right) = -\left(\frac{11}{4} - \frac{1}{4}\right) = -\frac{10}{4} = -\frac{5}{2}$$

$$3-1 \quad \left(-\frac{2}{4}\right) + \left(+\frac{3}{4}\right) = +\left(\frac{3}{4} - \frac{2}{4}\right) = +\frac{1}{4}$$

$$3-2 \quad \left(-\frac{4}{10}\right) + \left(+\frac{3}{10}\right) = -\left(\frac{4}{10} - \frac{3}{10}\right) = -\frac{1}{10}$$

$$4-1 \quad \left(+\frac{10}{5}\right) + \left(-\frac{2}{5}\right) = +\left(\frac{10}{5} - \frac{2}{5}\right) = +\frac{8}{5}$$

$$4-2 \quad \left(+\frac{8}{3}\right) + \left(-\frac{15}{3}\right) = -\left(\frac{15}{3} - \frac{8}{3}\right) = -\frac{7}{3}$$

$$5-1 \quad \left(+\frac{3}{12}\right) + \left(-\frac{10}{12}\right) = -\left(\frac{10}{12} - \frac{3}{12}\right) = -\frac{7}{12}$$

$$5-2 \quad \left(+\frac{21}{56}\right) + \left(-\frac{32}{56}\right) = -\left(\frac{32}{56} - \frac{21}{56}\right) = -\frac{11}{56}$$

$$6-1 \quad \left(+\frac{7}{10}\right) + \left(-\frac{4}{10}\right) = +\left(\frac{7}{10} - \frac{4}{10}\right) = +\frac{3}{10}$$

$$6-2 \quad \left(+\frac{2}{12}\right) + \left(-\frac{9}{12}\right) = -\left(\frac{9}{12} - \frac{2}{12}\right) = -\frac{7}{12}$$

$$7-1 \quad \left(-\frac{9}{15}\right) + \left(+\frac{10}{15}\right) = +\left(\frac{10}{15} - \frac{9}{15}\right) = +\frac{1}{15}$$

$$7-2 \quad \left(-\frac{15}{24}\right) + \left(+\frac{40}{24}\right) = +\left(\frac{40}{24} - \frac{15}{24}\right) = +\frac{25}{24}$$

$$8-1 \quad \left(-\frac{9}{6}\right) + \left(+\frac{10}{6}\right) = +\left(\frac{10}{6} - \frac{9}{6}\right) = +\frac{1}{6}$$

$$8-2 \quad \left(-\frac{4}{24}\right) + \left(+\frac{15}{24}\right) = +\left(\frac{15}{24} - \frac{4}{24}\right) = +\frac{11}{24}$$

$$9-1 \quad (+2.4) + (-5.8) = -(5.8 - 2.4) = -3.4$$

$$9-2 \quad (-4.3) + (+0.6) = -(4.3 - 0.6) = -3.7$$

$$10-1 \quad (+1.9) + (-4.2) = -(4.2 - 1.9) = -2.3$$

$$10-2 \quad (-10.4) + (+5.5) = -(10.4 - 5.5) = -4.9$$

$$11-1 \quad \left(+\frac{5}{2}\right) + \left(-\frac{7}{4}\right) = \left(+\frac{10}{4}\right) + \left(-\frac{7}{4}\right) = +\frac{3}{4}$$

$$11-2 \quad \left(-\frac{3}{4}\right) + \left(+\frac{11}{4}\right) = +\frac{8}{4} = +2$$

$$12-1 \quad \left(-\frac{7}{5}\right) + \left(+\frac{32}{5}\right) = +\frac{25}{5} = +5$$

$$12-2 \quad \left(+\frac{8}{3}\right) + \left(-\frac{1}{5}\right) = \left(+\frac{40}{15}\right) + \left(-\frac{3}{15}\right) = +\frac{37}{15}$$

06 덧셈의 계산 법칙

p. 94

$$1-1 \quad -3, -3, -5 \quad \text{㉠ 덧셈의 교환법칙} \quad \text{㉡ 덧셈의 결합법칙}$$

$$1-2 \quad -2, -2, +2, -2, 0$$

㉠ 덧셈의 교환법칙 ㉡ 덧셈의 결합법칙

$$2-1 \quad +\frac{2}{5}, +\frac{2}{5}, -\frac{2}{5}, -\frac{23}{20}$$

$$2-2 \quad -4, +6$$

07 덧셈의 계산 법칙을 이용한 계산

p. 95

$$1-1 \quad 0$$

$$1-2 \quad +3$$

$$2-1 \quad +5$$

$$2-2 \quad +1$$

$$3-1 \quad +\frac{1}{3}$$

$$3-2 \quad -\frac{1}{4}$$

$$4-1 \quad -6$$

$$4-2 \quad -10$$

$$\begin{aligned}
 1-1 & (+3)+(-4)+(+1) \\
 & =(+3)+(+1)+(-4) \\
 & =\{(+3)+(+1)\}+(-4) \\
 & =(+4)+(-4)=0
 \end{aligned}$$

$$\begin{aligned}
 1-2 & (-5)+(+11)+(-3) \\
 & =(+11)+(-5)+(-3) \\
 & =(+11)+\{(-5)+(-3)\} \\
 & =(+11)+(-8)=+3
 \end{aligned}$$

$$\begin{aligned}
 2-1 & \left(+\frac{1}{4}\right)+(+7)+\left(-\frac{9}{4}\right) \\
 & =\left(+\frac{1}{4}\right)+\left(-\frac{9}{4}\right)+(+7) \\
 & =\left\{\left(+\frac{1}{4}\right)+\left(-\frac{9}{4}\right)\right\}+(+7) \\
 & =(-2)+(+7)=+5
 \end{aligned}$$

$$\begin{aligned}
 2-2 & \left(-\frac{5}{2}\right)+(+4)+\left(-\frac{1}{2}\right) \\
 & =\left(-\frac{5}{2}\right)+\left(-\frac{1}{2}\right)+(+4) \\
 & =\left\{\left(-\frac{5}{2}\right)+\left(-\frac{1}{2}\right)\right\}+(+4) \\
 & =(-3)+(+4)=+1
 \end{aligned}$$

$$\begin{aligned}
 3-1 & \left(+\frac{3}{5}\right)+\left(-\frac{2}{3}\right)+\left(+\frac{2}{5}\right) \\
 & =\left(+\frac{3}{5}\right)+\left(+\frac{2}{5}\right)+\left(-\frac{2}{3}\right) \\
 & =\left\{\left(+\frac{3}{5}\right)+\left(+\frac{2}{5}\right)\right\}+\left(-\frac{2}{3}\right) \\
 & =(+1)+\left(-\frac{2}{3}\right)=+\frac{1}{3}
 \end{aligned}$$

$$\begin{aligned}
 3-2 & \left(-\frac{1}{3}\right)+\left(+\frac{7}{4}\right)+\left(-\frac{5}{3}\right) \\
 & =\left(-\frac{1}{3}\right)+\left(-\frac{5}{3}\right)+\left(+\frac{7}{4}\right) \\
 & =\left\{\left(-\frac{1}{3}\right)+\left(-\frac{5}{3}\right)\right\}+\left(+\frac{7}{4}\right) \\
 & =(-2)+\left(+\frac{7}{4}\right)=-\frac{1}{4}
 \end{aligned}$$

$$\begin{aligned}
 4-1 & (-7)+(+9)+(+3)+(-11) \\
 & =(-7)+(-11)+(+9)+(+3) \\
 & =\{(-7)+(-11)\}+\{(+9)+(+3)\} \\
 & =(-18)+(+12)=-6
 \end{aligned}$$

$$\begin{aligned}
 4-2 & (+9)+(-2)+(-19)+(+2) \\
 & =(+9)+(+2)+(-2)+(-19) \\
 & =\{(+9)+(+2)\}+\{(-2)+(-19)\} \\
 & =(+11)+(-21)=-10
 \end{aligned}$$

STEP 2

기본연산 집중연습 | 03~07

p. 96 ~ p. 97

1 과자

$$2-1 \quad +\frac{7}{3}$$

$$2-2 \quad -7, -\frac{26}{5}$$

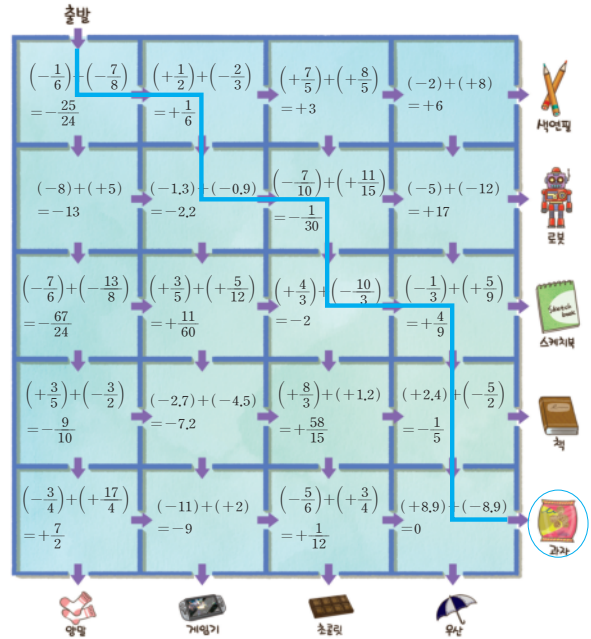
$$2-3 \quad -\frac{5}{28}, +\frac{65}{28}$$

$$2-4 \quad +12, +\frac{68}{9}$$

$$2-5 \quad -\frac{5}{4}, -\frac{11}{12}$$

$$2-6 \quad -\frac{7}{10}, -\frac{13}{10}$$

1



STEP 1

08 정수의 뺄셈(1) : (어떤 수) - (양수)

p. 98 ~ p. 99

$$1-1 \quad +, +4$$

$$1-2 \quad +3$$

$$1-3 \quad -3$$

$$2-1 \quad -2$$

$$2-2 \quad -2$$

$$2-3 \quad -4$$

$$3-1 \quad -8$$

$$3-2 \quad -4$$

$$3-3 \quad -21$$

$$4-1 \quad -14$$

$$4-2 \quad -25$$

$$4-3 \quad -20$$

$$5-1 \quad -2$$

$$5-2 \quad -14$$

$$5-3 \quad -10$$

$$6-1 \quad -1$$

$$6-2 \quad -6$$

$$6-3 \quad -8$$

$$7-1 \quad -53$$

$$7-2 \quad -35$$

$$7-3 \quad -57$$

$$8-1 \quad -21$$

$$8-2 \quad -11$$

$$8-3 \quad -20$$

$$9-1 \quad 0$$

$$9-2 \quad 0$$

$$9-3 \quad 0$$

$$10-1 \quad -36$$

$$10-2 \quad -18$$

$$10-3 \quad -66$$

$$11-1 \quad +6$$

$$11-2 \quad +15$$

$$11-3 \quad -8$$

$$12-1 \quad -5$$

$$12-2 \quad -1$$

$$12-3 \quad -13$$

$$3-1 \quad (-6)-(+2)=(-6)+(-2)=-8$$

$$3-2 \quad (-1)-(+3)=(-1)+(-3)=-4$$

$$3-3 \quad (-12)-(+9)=(-12)+(-9)=-21$$

$$4-1 \quad (-4) - (+10) = (-4) + (-10) = -14$$

$$4-2 \quad (-15) - (+10) = (-15) + (-10) = -25$$

$$4-3 \quad (-9) - (+11) = (-9) + (-11) = -20$$

$$5-1 \quad (-1) - (+1) = (-1) + (-1) = -2$$

$$5-2 \quad (-7) - (+7) = (-7) + (-7) = -14$$

$$5-3 \quad (-5) - (+5) = (-5) + (-5) = -10$$

$$7-1 \quad (-19) - (+34) = (-19) + (-34) = -53$$

$$7-2 \quad (-17) - (+18) = (-17) + (-18) = -35$$

$$7-3 \quad (-21) - (+36) = (-21) + (-36) = -57$$

$$8-1 \quad (-5) - (+16) = (-5) + (-16) = -21$$

$$8-2 \quad (-10) - (+1) = (-10) + (-1) = -11$$

$$8-3 \quad (-17) - (+3) = (-17) + (-3) = -20$$

$$9-1 \quad (+3) - (+3) = (+3) + (-3) = 0$$

$$9-2 \quad (+7) - (+7) = (+7) + (-7) = 0$$

$$9-3 \quad (+19) - (+19) = (+19) + (-19) = 0$$

$$10-1 \quad (-18) - (+18) = (-18) + (-18) = -36$$

$$10-2 \quad (-9) - (+9) = (-9) + (-9) = -18$$

$$10-3 \quad (-33) - (+33) = (-33) + (-33) = -66$$

$$12-1 \quad 0 - (+5) = 0 + (-5) = -5$$

$$12-2 \quad 0 - (+1) = 0 + (-1) = -1$$

$$12-3 \quad 0 - (+13) = 0 + (-13) = -13$$

09 정수의 뺄셈(2) : (어떤 수) - (음수)

p. 100 ~ p. 101

$$1-1 \quad +, +22 \quad 1-2 \quad +9 \quad 1-3 \quad +10$$

$$2-1 \quad +15 \quad 2-2 \quad +20 \quad 2-3 \quad +12$$

$$3-1 \quad +7 \quad 3-2 \quad +10 \quad 3-3 \quad -7$$

$$4-1 \quad -9 \quad 4-2 \quad +17 \quad 4-3 \quad -3$$

$$5-1 \quad 0 \quad 5-2 \quad 0 \quad 5-3 \quad 0$$

$$6-1 \quad +15 \quad 6-2 \quad +14 \quad 6-3 \quad +11$$

$$7-1 \quad +27 \quad 7-2 \quad +50 \quad 7-3 \quad +28$$

$$8-1 \quad +14 \quad 8-2 \quad +20 \quad 8-3 \quad +30$$

$$9-1 \quad -12 \quad 9-2 \quad -1 \quad 9-3 \quad +6$$

$$10-1 \quad -26 \quad 10-2 \quad +3 \quad 10-3 \quad -13$$

$$11-1 \quad 0 \quad 11-2 \quad 0 \quad 11-3 \quad 0$$

$$12-1 \quad +29 \quad 12-2 \quad +13 \quad 12-3 \quad +8$$

$$1-2 \quad (+7) - (-2) = (+7) + (+2) = +9$$

$$1-3 \quad (+4) - (-6) = (+4) + (+6) = +10$$

$$2-1 \quad (+5) - (-10) = (+5) + (+10) = +15$$

$$2-2 \quad (+12) - (-8) = (+12) + (+8) = +20$$

$$2-3 \quad (+3) - (-9) = (+3) + (+9) = +12$$

$$3-1 \quad (-1) - (-8) = (-1) + (+8) = +7$$

$$3-2 \quad (-5) - (-15) = (-5) + (+15) = +10$$

$$3-3 \quad (-16) - (-9) = (-16) + (+9) = -7$$

$$4-1 \quad (-12) - (-3) = (-12) + (+3) = -9$$

$$4-2 \quad (-8) - (-25) = (-8) + (+25) = +17$$

$$4-3 \quad (-30) - (-27) = (-30) + (+27) = -3$$

$$5-1 \quad (-1) - (-1) = (-1) + (+1) = 0$$

$$5-2 \quad (-7) - (-7) = (-7) + (+7) = 0$$

$$5-3 \quad (-20) - (-20) = (-20) + (+20) = 0$$

$$6-1 \quad (+6) - (-9) = (+6) + (+9) = +15$$

$$6-2 \quad (+4) - (-10) = (+4) + (+10) = +14$$

$$6-3 \quad (+3) - (-8) = (+3) + (+8) = +11$$

$$7-1 \quad (+17) - (-10) = (+17) + (+10) = +27$$

$$7-2 \quad (+18) - (-32) = (+18) + (+32) = +50$$

$$7-3 \quad (+19) - (-9) = (+19) + (+9) = +28$$

$$8-1 \quad (+7) - (-7) = (+7) + (+7) = +14$$

$$8-2 \quad (+10) - (-10) = (+10) + (+10) = +20$$

$$8-3 \quad (+15) - (-15) = (+15) + (+15) = +30$$

$$9-1 \quad (-27) - (-15) = (-27) + (+15) = -12$$

$$9-2 \quad (-5) - (-4) = (-5) + (+4) = -1$$

$$9-3 \quad (-11) - (-17) = (-11) + (+17) = +6$$

$$10-1 \quad (-38) - (-12) = (-38) + (+12) = -26$$

$$10-2 \quad (-7) - (-10) = (-7) + (+10) = +3$$

$$10-3 \quad (-15) - (-2) = (-15) + (+2) = -13$$

$$11-1 \quad (-4) - (-4) = (-4) + (+4) = 0$$

$$11-2 \quad (-9) - (-9) = (-9) + (+9) = 0$$

$$11-3 \quad (-8) - (-8) = (-8) + (+8) = 0$$

$$12-1 \quad 0 - (-29) = 0 + (+29) = +29$$

$$12-2 \quad 0 - (-13) = 0 + (+13) = +13$$

$$12-3 \quad 0 - (-8) = 0 + (+8) = +8$$

STEP 2

기본연산 집중연습 | 08~09

p. 102

$$1-1 \quad -7$$

$$1-2 \quad +15$$

$$1-3 \quad -19$$

$$1-4 \quad -31$$

$$1-5 \quad -13$$

$$1-6 \quad -8$$

$$1-7 \quad +43$$

$$1-8 \quad +6$$

$$1-9 \quad -15$$

$$1-1 \quad \ominus = (+2) - (+7) = (+2) + (-7) = -5$$

$$\oslash = (+7) - (+5) = (+7) + (-5) = +2$$

$$\ominus = \ominus - \oslash = (-5) - (+2) \\ = (-5) + (-2) = -7$$

$$1-2 \quad \ominus = (+10) - (-3) = (+10) + (+3) = +13$$

$$\oslash = (-3) - (-1) = (-3) + (+1) = -2$$

$$\ominus = \ominus - \oslash = (+13) - (-2) \\ = (+13) + (+2) = +15$$

$$1-3 \quad \ominus = (-8) - (+3) = (-8) + (-3) = -11$$

$$\oslash = (+3) - (-5) = (+3) + (+5) = +8$$

$$\ominus = \ominus - \oslash = (-11) - (+8) \\ = (-11) + (-8) = -19$$

$$1-4 \quad \ominus = (-12) - (+9) = (-12) + (-9) = -21$$

$$\oslash = (+9) - (-1) = (+9) + (+1) = +10$$

$$\ominus = \ominus - \oslash = (-21) - (+10) \\ = (-21) + (-10) = -31$$

$$1-5 \quad \ominus = (-2) - (+3) = (-2) + (-3) = -5$$

$$\oslash = (+3) - (-5) = (+3) + (+5) = +8$$

$$\ominus = \ominus - \oslash = (-5) - (+8) \\ = (-5) + (-8) = -13$$

$$1-6 \quad \ominus = (-11) - (-2) = (-11) + (+2) = -9$$

$$\oslash = (-2) - (-1) = (-2) + (+1) = -1$$

$$\ominus = \ominus - \oslash = (-9) - (-1) \\ = (-9) + (+1) = -8$$

$$1-7 \quad \ominus = (+3) - (-19) = (+3) + (+19) = +22$$

$$\oslash = (-19) - (+2) = (-19) + (-2) = -21$$

$$\ominus = \ominus - \oslash = (+22) - (-21) \\ = (+22) + (+21) = +43$$

$$1-8 \quad \ominus = (-23) - (-6) = (-23) + (+6) = -17$$

$$\oslash = (-6) - (+17) = (-6) + (-17) = -23$$

$$\ominus = \ominus - \oslash = (-17) - (-23) \\ = (-17) + (+23) = +6$$

$$1-9 \quad \ominus = (-8) - 0 = -8$$

$$\oslash = 0 - (-7) = 0 + (+7) = +7$$

$$\ominus = \ominus - \oslash = (-8) - (+7) \\ = (-8) + (-7) = -15$$

STEP 1

10 분수의 뺄셈

p. 103

1-1	$7, 5, 2, \frac{1}{2}$	1-2	$\frac{1}{3}$
2-1	$\frac{3}{5}$	2-2	$\frac{5}{6}$
3-1	$7, 3, 14, 9, 5$	3-2	$\frac{11}{63}$
4-1	$\frac{13}{24}$	4-2	$\frac{7}{12}$
5-1	$\frac{19}{36}$	5-2	$\frac{29}{42}$

$$3-2 \quad \frac{8}{9} - \frac{5}{7} = \frac{56}{63} - \frac{45}{63} = \frac{11}{63}$$

$$4-1 \quad \frac{11}{12} - \frac{3}{8} = \frac{22}{24} - \frac{9}{24} = \frac{13}{24}$$

$$4-2 \quad \frac{11}{6} - \frac{5}{4} = \frac{22}{12} - \frac{15}{12} = \frac{7}{12}$$

$$5-1 \quad \frac{3}{4} - \frac{2}{9} = \frac{27}{36} - \frac{8}{36} = \frac{19}{36}$$

$$5-2 \quad \frac{13}{14} - \frac{5}{21} = \frac{39}{42} - \frac{10}{42} = \frac{29}{42}$$

11 유리수의 뺄셈(1) : (어떤 수) - (양수)

p. 104 ~ p. 105

1-1	$+, +, +, 4, +\frac{2}{3}$	1-2	$+\frac{3}{2}$
2-1	$+\frac{1}{5}$	2-2	$-\frac{9}{20}$
3-1	$+, -, -\frac{8}{7}$	3-2	$-\frac{3}{2}$
4-1	$-\frac{5}{4}$	4-2	$-\frac{34}{15}$
5-1	0	5-2	0
6-1	$-\frac{1}{9}$	6-2	$+\frac{5}{8}$
7-1	$-\frac{7}{6}$	7-2	$-\frac{1}{14}$
8-1	$-\frac{34}{21}$	8-2	$-\frac{17}{12}$
9-1	$-\frac{17}{20}$	9-2	$-\frac{29}{14}$
10-1	-3.2	10-2	-18.5
11-1	$-\frac{7}{3}$	11-2	$-\frac{8}{11}$
12-1	-0.6		연구 2.5, 2.5, -2.5, -0.6
12-2	-5.5		

$$1-2 \quad \left(+\frac{7}{4}\right) - \left(+\frac{1}{4}\right) = \left(+\frac{7}{4}\right) + \left(-\frac{1}{4}\right) \\ = +\frac{6}{4} = +\frac{3}{2}$$

$$2-1 \quad \left(+\frac{1}{2}\right) - \left(+\frac{3}{10}\right) = \left(+\frac{1}{2}\right) + \left(-\frac{3}{10}\right) \\ = \left(+\frac{5}{10}\right) + \left(-\frac{3}{10}\right) \\ = +\frac{2}{10} = +\frac{1}{5}$$

$$2-2 \quad \left(+\frac{3}{4}\right) - \left(+\frac{6}{5}\right) = \left(+\frac{3}{4}\right) + \left(-\frac{6}{5}\right) \\ = \left(+\frac{15}{20}\right) + \left(-\frac{24}{20}\right) = -\frac{9}{20}$$

$$3-2 \quad \left(-\frac{7}{8}\right) - \left(+\frac{5}{8}\right) = \left(-\frac{7}{8}\right) + \left(-\frac{5}{8}\right) \\ = -\frac{12}{8} = -\frac{3}{2}$$

$$4-1 \quad \left(-\frac{3}{4}\right) - \left(+\frac{1}{2}\right) = \left(-\frac{3}{4}\right) + \left(-\frac{1}{2}\right) \\ = \left(-\frac{3}{4}\right) + \left(-\frac{2}{4}\right) = -\frac{5}{4}$$

$$4-2 \quad \left(-\frac{8}{5}\right) - \left(+\frac{2}{3}\right) = \left(-\frac{8}{5}\right) + \left(-\frac{2}{3}\right) \\ = \left(-\frac{24}{15}\right) + \left(-\frac{10}{15}\right) = -\frac{34}{15}$$

$$5-1 \quad \left(+\frac{4}{9}\right) - \left(+\frac{4}{9}\right) = \left(+\frac{4}{9}\right) + \left(-\frac{4}{9}\right) = 0$$

$$5-2 \quad \left(+\frac{3}{8}\right) - \left(+\frac{3}{8}\right) = \left(+\frac{3}{8}\right) + \left(-\frac{3}{8}\right) = 0$$

$$6-1 \quad \left(+\frac{5}{9}\right) - \left(+\frac{2}{3}\right) = \left(+\frac{5}{9}\right) + \left(-\frac{2}{3}\right) \\ = \left(+\frac{5}{9}\right) + \left(-\frac{6}{9}\right) = -\frac{1}{9}$$

$$6-2 \quad \left(+\frac{3}{2}\right) - \left(+\frac{7}{8}\right) = \left(+\frac{3}{2}\right) + \left(-\frac{7}{8}\right) \\ = \left(+\frac{12}{8}\right) + \left(-\frac{7}{8}\right) = +\frac{5}{8}$$

$$7-1 \quad \left(+\frac{4}{3}\right) - \left(+\frac{5}{2}\right) = \left(+\frac{4}{3}\right) + \left(-\frac{5}{2}\right) \\ = \left(+\frac{8}{6}\right) + \left(-\frac{15}{6}\right) = -\frac{7}{6}$$

$$7-2 \quad \left(+\frac{2}{7}\right) - \left(+\frac{5}{14}\right) = \left(+\frac{2}{7}\right) + \left(-\frac{5}{14}\right) \\ = \left(+\frac{4}{14}\right) + \left(-\frac{5}{14}\right) = -\frac{1}{14}$$

$$8-1 \quad \left(-\frac{9}{7}\right) - \left(+\frac{1}{3}\right) = \left(-\frac{9}{7}\right) + \left(-\frac{1}{3}\right) \\ = \left(-\frac{27}{21}\right) + \left(-\frac{7}{21}\right) = -\frac{34}{21}$$

$$\begin{aligned} \mathbf{8-2} \quad & \left(-\frac{2}{3}\right) - \left(+\frac{3}{4}\right) = \left(-\frac{2}{3}\right) + \left(-\frac{3}{4}\right) \\ & = \left(-\frac{8}{12}\right) + \left(-\frac{9}{12}\right) = -\frac{17}{12} \end{aligned}$$

$$\begin{aligned} \mathbf{9-1} \quad & \left(-\frac{4}{5}\right) - \left(+\frac{1}{20}\right) = \left(-\frac{4}{5}\right) + \left(-\frac{1}{20}\right) \\ & = \left(-\frac{16}{20}\right) + \left(-\frac{1}{20}\right) = -\frac{17}{20} \end{aligned}$$

$$\begin{aligned} \mathbf{9-2} \quad & \left(-\frac{3}{2}\right) - \left(+\frac{4}{7}\right) = \left(-\frac{3}{2}\right) + \left(-\frac{4}{7}\right) \\ & = \left(-\frac{21}{14}\right) + \left(-\frac{8}{14}\right) = -\frac{29}{14} \end{aligned}$$

$$\mathbf{10-1} \quad (+1.7) - (+4.9) = (+1.7) + (-4.9) = -3.2$$

$$\mathbf{10-2} \quad (-8.1) - (+10.4) = (-8.1) + (-10.4) = -18.5$$

$$\mathbf{11-1} \quad \left(-\frac{7}{6}\right) - \left(+\frac{7}{6}\right) = \left(-\frac{7}{6}\right) + \left(-\frac{7}{6}\right) = -\frac{14}{6} = -\frac{7}{3}$$

$$\mathbf{11-2} \quad \left(-\frac{4}{11}\right) - \left(+\frac{4}{11}\right) = \left(-\frac{4}{11}\right) + \left(-\frac{4}{11}\right) = -\frac{8}{11}$$

$$\begin{aligned} \mathbf{12-2} \quad & (-4.4) - \left(+\frac{11}{10}\right) = (-4.4) - (+1.1) \\ & = (-4.4) + (-1.1) = -5.5 \end{aligned}$$

12 유리수의 뺄셈(2) : (어떤 수) - (음수) p. 106 ~ p. 107

$$\mathbf{1-1} \quad +, +, +, 10, +\frac{5}{2}$$

$$\mathbf{1-2} \quad +5$$

$$\mathbf{2-1} \quad +\frac{41}{40}$$

$$\mathbf{2-2} \quad +\frac{43}{30}$$

$$\mathbf{3-1} \quad +, +, +, \frac{1}{7}$$

$$\mathbf{3-2} \quad -1$$

$$\mathbf{4-1} \quad -\frac{1}{12}$$

$$\mathbf{4-2} \quad -\frac{29}{18}$$

$$\mathbf{5-1} \quad -\frac{35}{24}$$

$$\mathbf{5-2} \quad +\frac{3}{20}$$

$$\mathbf{6-1} \quad +\frac{13}{6}$$

$$\mathbf{6-2} \quad +\frac{11}{6}$$

$$\mathbf{7-1} \quad -\frac{1}{20}$$

$$\mathbf{7-2} \quad -\frac{5}{28}$$

$$\mathbf{8-1} \quad -\frac{23}{15}$$

$$\mathbf{8-2} \quad +\frac{13}{36}$$

$$\mathbf{9-1} \quad +7.2$$

$$\mathbf{9-2} \quad +1.3$$

$$\mathbf{10-1} \quad -\frac{9}{4} \quad \text{연구} \quad \frac{5}{2}, \frac{5}{2}, 4, -\frac{9}{4}$$

$$\mathbf{10-2} \quad +\frac{21}{8}$$

$$\mathbf{11-1} \quad +4.3$$

$$\mathbf{11-2} \quad +0.2$$

$$\mathbf{12-1} \quad +\frac{4}{3}$$

$$\mathbf{12-2} \quad 0$$

$$\mathbf{1-2} \quad \left(+\frac{1}{2}\right) - \left(-\frac{9}{2}\right) = \left(+\frac{1}{2}\right) + \left(+\frac{9}{2}\right) = +\frac{10}{2} = +5$$

$$\begin{aligned} \mathbf{2-1} \quad & \left(+\frac{9}{10}\right) - \left(-\frac{1}{8}\right) = \left(+\frac{9}{10}\right) + \left(+\frac{1}{8}\right) \\ & = \left(+\frac{36}{40}\right) + \left(+\frac{5}{40}\right) = +\frac{41}{40} \end{aligned}$$

$$\begin{aligned} \mathbf{2-2} \quad & \left(+\frac{5}{6}\right) - \left(-\frac{3}{5}\right) = \left(+\frac{5}{6}\right) + \left(+\frac{3}{5}\right) \\ & = \left(+\frac{25}{30}\right) + \left(+\frac{18}{30}\right) = +\frac{43}{30} \end{aligned}$$

$$\mathbf{3-2} \quad \left(-\frac{7}{5}\right) - \left(-\frac{2}{5}\right) = \left(-\frac{7}{5}\right) + \left(+\frac{2}{5}\right) = -\frac{5}{5} = -1$$

$$\begin{aligned} \mathbf{4-1} \quad & \left(-\frac{3}{4}\right) - \left(-\frac{2}{3}\right) = \left(-\frac{3}{4}\right) + \left(+\frac{2}{3}\right) \\ & = \left(-\frac{9}{12}\right) + \left(+\frac{8}{12}\right) = -\frac{1}{12} \end{aligned}$$

$$\begin{aligned} \mathbf{4-2} \quad & \left(-\frac{5}{2}\right) - \left(-\frac{8}{9}\right) = \left(-\frac{5}{2}\right) + \left(+\frac{8}{9}\right) \\ & = \left(-\frac{45}{18}\right) + \left(+\frac{16}{18}\right) = -\frac{29}{18} \end{aligned}$$

$$\begin{aligned} \mathbf{5-1} \quad & \left(-\frac{11}{6}\right) - \left(-\frac{3}{8}\right) = \left(-\frac{11}{6}\right) + \left(+\frac{3}{8}\right) \\ & = \left(-\frac{44}{24}\right) + \left(+\frac{9}{24}\right) = -\frac{35}{24} \end{aligned}$$

$$\begin{aligned} \mathbf{5-2} \quad & \left(-\frac{3}{5}\right) - \left(-\frac{3}{4}\right) = \left(-\frac{3}{5}\right) + \left(+\frac{3}{4}\right) \\ & = \left(-\frac{12}{20}\right) + \left(+\frac{15}{20}\right) = +\frac{3}{20} \end{aligned}$$

$$\begin{aligned} \mathbf{6-1} \quad & \left(+\frac{4}{3}\right) - \left(-\frac{5}{6}\right) = \left(+\frac{4}{3}\right) + \left(+\frac{5}{6}\right) \\ & = \left(+\frac{8}{6}\right) + \left(+\frac{5}{6}\right) = +\frac{13}{6} \end{aligned}$$

$$\begin{aligned} \mathbf{6-2} \quad & \left(+\frac{3}{2}\right) - \left(-\frac{1}{3}\right) = \left(+\frac{3}{2}\right) + \left(+\frac{1}{3}\right) \\ & = \left(+\frac{9}{6}\right) + \left(+\frac{2}{6}\right) = +\frac{11}{6} \end{aligned}$$

$$\begin{aligned} \mathbf{7-1} \quad & \left(-\frac{4}{5}\right) - \left(-\frac{3}{4}\right) = \left(-\frac{4}{5}\right) + \left(+\frac{3}{4}\right) \\ & = \left(-\frac{16}{20}\right) + \left(+\frac{15}{20}\right) = -\frac{1}{20} \end{aligned}$$

$$\begin{aligned} \mathbf{7-2} \quad & \left(-\frac{3}{4}\right) - \left(-\frac{4}{7}\right) = \left(-\frac{3}{4}\right) + \left(+\frac{4}{7}\right) \\ & = \left(-\frac{21}{28}\right) + \left(+\frac{16}{28}\right) = -\frac{5}{28} \end{aligned}$$

$$\begin{aligned} 8-1 \quad & \left(-\frac{11}{5}\right) - \left(-\frac{2}{3}\right) = \left(-\frac{11}{5}\right) + \left(+\frac{2}{3}\right) \\ & = \left(-\frac{33}{15}\right) + \left(+\frac{10}{15}\right) = -\frac{23}{15} \end{aligned}$$

$$\begin{aligned} 8-2 \quad & \left(-\frac{5}{12}\right) - \left(-\frac{7}{9}\right) = \left(-\frac{5}{12}\right) + \left(+\frac{7}{9}\right) \\ & = \left(-\frac{15}{36}\right) + \left(+\frac{28}{36}\right) = +\frac{13}{36} \end{aligned}$$

$$9-1 \quad (+5.5) - (-1.7) = (+5.5) + (+1.7) = +7.2$$

$$9-2 \quad (-3.2) - (-4.5) = (-3.2) + (+4.5) = +1.3$$

$$\begin{aligned} 10-2 \quad & \left(+\frac{9}{8}\right) - (-1.5) = \left(+\frac{9}{8}\right) + (+1.5) \\ & = \left(+\frac{9}{8}\right) + \left(+\frac{3}{2}\right) \\ & = \left(+\frac{9}{8}\right) + \left(+\frac{12}{8}\right) = +\frac{21}{8} \end{aligned}$$

$$\begin{aligned} 11-1 \quad & (+3.7) - \left(-\frac{3}{5}\right) = (+3.7) + \left(+\frac{3}{5}\right) \\ & = (+3.7) + (+0.6) = +4.3 \end{aligned}$$

$$\begin{aligned} 11-2 \quad & \left(-\frac{2}{5}\right) - (-0.6) = \left(-\frac{2}{5}\right) + (+0.6) \\ & = (-0.4) + (+0.6) = +0.2 \end{aligned}$$

$$12-1 \quad \left(+\frac{2}{3}\right) - \left(-\frac{2}{3}\right) = \left(+\frac{2}{3}\right) + \left(+\frac{2}{3}\right) = +\frac{4}{3}$$

$$12-2 \quad \left(-\frac{6}{7}\right) - \left(-\frac{6}{7}\right) = \left(-\frac{6}{7}\right) + \left(+\frac{6}{7}\right) = 0$$

STEP 2

기본연산 집중연습 | 10~12

p. 108 ~ p. 109

1 설악산

$$2-1 \quad -\frac{5}{12}$$

$$2-2 \quad -\frac{7}{4}, -\frac{7}{6}$$

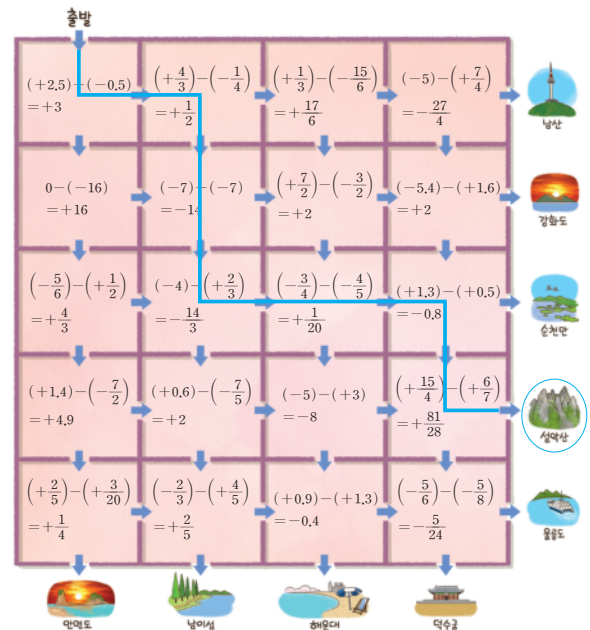
$$2-3 \quad +\frac{1}{9}, +\frac{11}{18}$$

$$2-4 \quad -8.5, -9.8$$

$$2-5 \quad +5, +\frac{38}{7}$$

$$2-6 \quad -4.5, -11.8$$

1



STEP 1

13 정수의 덧셈과 뺄셈의 혼합 계산

p. 110 ~ p. 111

$$1-1 \quad -5, 0$$

$$1-2 \quad 0$$

$$2-1 \quad -2$$

$$2-2 \quad +8$$

$$3-1 \quad -10$$

$$3-2 \quad +7$$

$$4-1 \quad +7$$

$$4-2 \quad -6$$

$$5-1 \quad 0, -4$$

$$5-2 \quad +21$$

$$6-1 \quad -7$$

$$6-2 \quad -7$$

$$7-1 \quad +1$$

$$7-2 \quad +4$$

$$8-1 \quad +10$$

$$8-2 \quad -8$$

$$9-1 \quad -16$$

$$9-2 \quad +14$$

$$10-1 \quad +2$$

$$10-2 \quad -14$$

$$\begin{aligned} 1-2 \quad & (-9) - (-6) + (+3) = (-9) + (+6) + (+3) \\ & = (-9) + \{(+6) + (+3)\} \\ & = (-9) + (+9) \\ & = 0 \end{aligned}$$

$$\begin{aligned} 2-1 \quad & (-5) - (-4) + (-1) = (-5) + (+4) + (-1) \\ & = \{(-5) + (-1)\} + (+4) \\ & = (-6) + (+4) \\ & = -2 \end{aligned}$$

$$\begin{aligned} \text{2-2 } (+6)+(-1)-(-3) &= (+6)+(-1)+(+3) \\ &= \{(+6)+(+3)\}+(-1) \\ &= (+9)+(-1) \\ &= +8 \end{aligned}$$

$$\begin{aligned} \text{3-1 } (-8)-(-3)-(+5) &= (-8)+(+3)+(-5) \\ &= \{(-8)+(-5)\}+(+3) \\ &= (-13)+(+3) \\ &= -10 \end{aligned}$$

$$\begin{aligned} \text{3-2 } (-6)-(-8)-(-5) &= (-6)+(+8)+(+5) \\ &= (-6)+\{(+8)+(+5)\} \\ &= (-6)+(+13) \\ &= +7 \end{aligned}$$

$$\begin{aligned} \text{4-1 } (+8)-(-7)-(+2)+(-6) &= (+8)+(+7)+(-2)+(-6) \\ &= \{(+8)+(+7)\}+\{(-2)+(-6)\} \\ &= (+15)+(-8)=+7 \end{aligned}$$

$$\begin{aligned} \text{4-2 } (-1)+(-10)-(+4)-(-9) &= (-1)+(-10)+(-4)+(+9) \\ &= \{(-1)+(-10)+(-4)\}+(+9) \\ &= (-15)+(+9)=-6 \end{aligned}$$

$$\begin{aligned} \text{5-2 } (+8)-(-21)-(+8) &= (+8)+(+21)+(-8) \\ &= \{(+8)+(-8)\}+(+21) \\ &= 0+(+21) \\ &= +21 \end{aligned}$$

$$\begin{aligned} \text{6-1 } (-4)-(+9)-(-6) &= (-4)+(-9)+(+6) \\ &= \{(-4)+(-9)\}+(+6) \\ &= (-13)+(+6) \\ &= -7 \end{aligned}$$

$$\begin{aligned} \text{6-2 } (-2)-(-5)-(+10) &= (-2)+(+5)+(-10) \\ &= \{(-2)+(-10)\}+(+5) \\ &= (-12)+(+5) \\ &= -7 \end{aligned}$$

$$\begin{aligned} \text{7-1 } (-2)-(-5)+(+1)+(-3) &= (-2)+(+5)+(+1)+(-3) \\ &= \{(-2)+(-3)\}+\{(+5)+(+1)\} \\ &= (-5)+(+6)=+1 \end{aligned}$$

$$\begin{aligned} \text{7-2 } (+8)+(-6)-(-7)-(+5) &= (+8)+(-6)+(+7)+(-5) \\ &= \{(+8)+(+7)\}+\{(-6)+(-5)\} \\ &= (+15)+(-11)=+4 \end{aligned}$$

$$\begin{aligned} \text{8-1 } (+5)-(-8)-(+7)-(-4) &= (+5)+(+8)+(-7)+(+4) \\ &= \{(+5)+(+8)+(+4)\}+(-7) \\ &= (+17)+(-7)=+10 \end{aligned}$$

$$\begin{aligned} \text{8-2 } (-3)-(+4)-(-5)+(-6) &= (-3)+(-4)+(+5)+(-6) \\ &= \{(-3)+(-4)+(-6)\}+(+5) \\ &= (-13)+(+5)=-8 \end{aligned}$$

$$\begin{aligned} \text{9-1 } (-2)+(-13)-(-9)-(+10) &= (-2)+(-13)+(+9)+(-10) \\ &= \{(-2)+(-13)+(-10)\}+(+9) \\ &= (-25)+(+9)=-16 \end{aligned}$$

$$\begin{aligned} \text{9-2 } (+18)-(-14)+(+5)-(+23) &= (+18)+(+14)+(+5)+(-23) \\ &= \{(+18)+(+14)+(+5)\}+(-23) \\ &= (+37)+(-23)=+14 \end{aligned}$$

$$\begin{aligned} \text{10-1 } (+17)-(+4)+(-15)-(-4) &= (+17)+(-4)+(-15)+(+4) \\ &= \{(+17)+(-15)\}+\{(-4)+(+4)\} \\ &= (+2)+0=+2 \end{aligned}$$

$$\begin{aligned} \text{10-2 } (-6)+(-4)-(+10)-(-6) &= (-6)+(-4)+(-10)+(+6) \\ &= \{(-6)+(+6)\}+\{(-4)+(-10)\} \\ &= 0+(-14)=-14 \end{aligned}$$

14 유리수의 덧셈과 뺄셈의 혼합 계산

p. 112 ~ p. 113

$$\text{1-1 } -5.9, -1.1 \qquad \text{1-2 } -2.6$$

$$\text{2-1 } -2.1 \qquad \text{2-2 } -3.5$$

$$\text{3-1 } +\frac{1}{2} \qquad \text{3-2 } -\frac{1}{3}$$

$$\text{4-1 } -3 \qquad \text{4-2 } -\frac{9}{7}$$

$$\text{5-1 } -\frac{25}{14}, -\frac{10}{7} \qquad \text{5-2 } +\frac{13}{30}$$

$$\text{6-1 } 0 \qquad \text{6-2 } 0$$

$$\text{7-1 } 0 \qquad \text{7-2 } 0$$

$$\text{8-1 } -\frac{1}{6} \qquad \text{8-2 } -\frac{1}{4}$$

$$\text{9-1 } -\frac{11}{4} \qquad \text{9-2 } +\frac{1}{4}$$

$$\begin{aligned}
 \text{1-2 } & (-0.4) - (-1.5) + (-3.7) \\
 & = (-0.4) + (+1.5) + (-3.7) \\
 & = \{(-0.4) + (-3.7)\} + (+1.5) \\
 & = (-4.1) + (+1.5) = -2.6
 \end{aligned}$$

$$\begin{aligned}
 \text{2-1 } & (-0.8) + (+3.2) - (+4.5) \\
 & = (-0.8) + (+3.2) + (-4.5) \\
 & = \{(-0.8) + (-4.5)\} + (+3.2) \\
 & = (-5.3) + (+3.2) = -2.1
 \end{aligned}$$

$$\begin{aligned}
 \text{2-2 } & (+3.5) + (-1.3) - (+5.7) \\
 & = (+3.5) + (-1.3) + (-5.7) \\
 & = (+3.5) + \{(-1.3) + (-5.7)\} \\
 & = (+3.5) + (-7) = -3.5
 \end{aligned}$$

$$\begin{aligned}
 \text{3-1 } & \left(-\frac{2}{5}\right) + \left(-\frac{1}{2}\right) - \left(-\frac{7}{5}\right) \\
 & = \left(-\frac{2}{5}\right) + \left(-\frac{1}{2}\right) + \left(+\frac{7}{5}\right) \\
 & = \left\{\left(-\frac{2}{5}\right) + \left(+\frac{7}{5}\right)\right\} + \left(-\frac{1}{2}\right) \\
 & = (+1) + \left(-\frac{1}{2}\right) = +\frac{1}{2}
 \end{aligned}$$

$$\begin{aligned}
 \text{3-2 } & \left(+\frac{2}{3}\right) - \left(+\frac{3}{4}\right) + \left(-\frac{1}{4}\right) \\
 & = \left(+\frac{2}{3}\right) + \left(-\frac{3}{4}\right) + \left(-\frac{1}{4}\right) \\
 & = \left(+\frac{2}{3}\right) + \left\{\left(-\frac{3}{4}\right) + \left(-\frac{1}{4}\right)\right\} \\
 & = \left(+\frac{2}{3}\right) + (-1) = -\frac{1}{3}
 \end{aligned}$$

$$\begin{aligned}
 \text{4-1 } & \left(+\frac{1}{3}\right) + \left(-\frac{4}{3}\right) - (+2) \\
 & = \left(+\frac{1}{3}\right) + \left(-\frac{4}{3}\right) + (-2) \\
 & = \left\{\left(+\frac{1}{3}\right) + \left(-\frac{4}{3}\right)\right\} + (-2) \\
 & = (-1) + (-2) = -3
 \end{aligned}$$

$$\begin{aligned}
 \text{4-2 } & (+6) - \left(-\frac{12}{7}\right) + (-9) \\
 & = (+6) + \left(+\frac{12}{7}\right) + (-9) \\
 & = \{(+6) + (-9)\} + \left(+\frac{12}{7}\right) \\
 & = (-3) + \left(+\frac{12}{7}\right) = -\frac{9}{7}
 \end{aligned}$$

$$\begin{aligned}
 \text{5-2 } & \left(-\frac{2}{5}\right) + \left(+\frac{2}{3}\right) - \left(-\frac{1}{6}\right) \\
 & = \left(-\frac{2}{5}\right) + \left(+\frac{2}{3}\right) + \left(+\frac{1}{6}\right) \\
 & = \left(-\frac{2}{5}\right) + \left\{\left(+\frac{2}{3}\right) + \left(+\frac{1}{6}\right)\right\} \\
 & = \left(-\frac{2}{5}\right) + \left\{\left(+\frac{4}{6}\right) + \left(+\frac{1}{6}\right)\right\} \\
 & = \left(-\frac{2}{5}\right) + \left(+\frac{5}{6}\right) \\
 & = \left(-\frac{12}{30}\right) + \left(+\frac{25}{30}\right) = +\frac{13}{30}
 \end{aligned}$$

$$\begin{aligned}
 \text{6-1 } & \left(-\frac{5}{6}\right) + \left(-\frac{1}{2}\right) - \left(-\frac{4}{3}\right) \\
 & = \left(-\frac{5}{6}\right) + \left(-\frac{1}{2}\right) + \left(+\frac{4}{3}\right) \\
 & = \left\{\left(-\frac{5}{6}\right) + \left(-\frac{1}{2}\right)\right\} + \left(+\frac{4}{3}\right) \\
 & = \left\{\left(-\frac{5}{6}\right) + \left(-\frac{3}{6}\right)\right\} + \left(+\frac{4}{3}\right) \\
 & = \left(-\frac{4}{3}\right) + \left(+\frac{4}{3}\right) = 0
 \end{aligned}$$

$$\begin{aligned}
 \text{6-2 } & \left(+\frac{3}{4}\right) + \left(-\frac{1}{6}\right) - \left(+\frac{7}{12}\right) \\
 & = \left(+\frac{3}{4}\right) + \left(-\frac{1}{6}\right) + \left(-\frac{7}{12}\right) \\
 & = \left(+\frac{3}{4}\right) + \left\{\left(-\frac{1}{6}\right) + \left(-\frac{7}{12}\right)\right\} \\
 & = \left(+\frac{3}{4}\right) + \left\{\left(-\frac{2}{12}\right) + \left(-\frac{7}{12}\right)\right\} \\
 & = \left(+\frac{3}{4}\right) + \left(-\frac{3}{4}\right) = 0
 \end{aligned}$$

$$\begin{aligned}
 \text{7-1 } & \left(+\frac{6}{5}\right) - \left(-\frac{1}{3}\right) + \left(-\frac{1}{5}\right) - \left(+\frac{4}{3}\right) \\
 & = \left(+\frac{6}{5}\right) + \left(+\frac{1}{3}\right) + \left(-\frac{1}{5}\right) + \left(-\frac{4}{3}\right) \\
 & = \left\{\left(+\frac{6}{5}\right) + \left(-\frac{1}{5}\right)\right\} + \left\{\left(+\frac{1}{3}\right) + \left(-\frac{4}{3}\right)\right\} \\
 & = (+1) + (-1) = 0
 \end{aligned}$$

$$\begin{aligned}
 \text{7-2 } & \left(-\frac{1}{2}\right) + (-1) + \left(-\frac{3}{2}\right) - (-3) \\
 & = \left(-\frac{1}{2}\right) + (-1) + \left(-\frac{3}{2}\right) + (+3) \\
 & = \left\{\left(-\frac{1}{2}\right) + \left(-\frac{3}{2}\right)\right\} + \{(-1) + (+3)\} \\
 & = (-2) + (+2) = 0
 \end{aligned}$$

$$\begin{aligned}
 8-1 & \left(-\frac{1}{2}\right) + \left(+\frac{1}{6}\right) - \left(+\frac{2}{3}\right) - \left(-\frac{5}{6}\right) \\
 & = \left(-\frac{1}{2}\right) + \left(+\frac{1}{6}\right) + \left(-\frac{2}{3}\right) + \left(+\frac{5}{6}\right) \\
 & = \left\{\left(-\frac{1}{2}\right) + \left(-\frac{2}{3}\right)\right\} + \left\{\left(+\frac{1}{6}\right) + \left(+\frac{5}{6}\right)\right\} \\
 & = \left(-\frac{7}{6}\right) + (+1) = -\frac{1}{6}
 \end{aligned}$$

$$\begin{aligned}
 8-2 & \left(+\frac{1}{4}\right) + \left(-\frac{2}{3}\right) - \left(-\frac{1}{2}\right) + \left(-\frac{1}{3}\right) \\
 & = \left(+\frac{1}{4}\right) + \left(-\frac{2}{3}\right) + \left(+\frac{1}{2}\right) + \left(-\frac{1}{3}\right) \\
 & = \left\{\left(+\frac{1}{4}\right) + \left(+\frac{1}{2}\right)\right\} + \left\{\left(-\frac{2}{3}\right) + \left(-\frac{1}{3}\right)\right\} \\
 & = \left(+\frac{3}{4}\right) + (-1) = -\frac{1}{4}
 \end{aligned}$$

$$\begin{aligned}
 9-1 & \left(-\frac{4}{5}\right) + \left(-\frac{9}{4}\right) - \left(+\frac{6}{5}\right) - \left(-\frac{3}{2}\right) \\
 & = \left(-\frac{4}{5}\right) + \left(-\frac{9}{4}\right) + \left(-\frac{6}{5}\right) + \left(+\frac{3}{2}\right) \\
 & = \left\{\left(-\frac{4}{5}\right) + \left(-\frac{6}{5}\right)\right\} + \left\{\left(-\frac{9}{4}\right) + \left(+\frac{3}{2}\right)\right\} \\
 & = (-2) + \left(-\frac{3}{4}\right) = -\frac{11}{4}
 \end{aligned}$$

$$\begin{aligned}
 9-2 & \left(-\frac{7}{3}\right) - \left(-\frac{3}{4}\right) - \left(+\frac{2}{3}\right) - \left(-\frac{5}{2}\right) \\
 & = \left(-\frac{7}{3}\right) + \left(+\frac{3}{4}\right) + \left(-\frac{2}{3}\right) + \left(+\frac{5}{2}\right) \\
 & = \left\{\left(-\frac{7}{3}\right) + \left(-\frac{2}{3}\right)\right\} + \left\{\left(+\frac{3}{4}\right) + \left(+\frac{5}{2}\right)\right\} \\
 & = (-3) + \left(+\frac{13}{4}\right) = +\frac{1}{4}
 \end{aligned}$$

STEP 2

기본연산 집중연습 | 13~14

p. 114

1-1	+12	1-2	-0.6
1-3	+3	1-4	+1
1-5	0	1-6	$-\frac{7}{6}$
1-7	$-\frac{19}{8}$	1-8	-2
1-9	$-\frac{1}{2}$	1-10	$-\frac{3}{4}$

세상에서 가장 예쁜 소는? 미소

STEP 1

15 부호가 생략된 수의 계산(1)

p. 115 ~ p. 116

1-1	12, -12, -5	1-2	-9	1-3	-18
2-1	-23	2-2	-17	2-3	-23

3-1	+5	3-2	-2	3-3	+4
4-1	0	4-2	-9	4-3	-17
5-1	-8, -13	5-2	-13	5-3	-20
6-1	-10	6-2	-13	6-3	-23
7-1	-2.6	7-2	-9	7-3	-4.8
8-1	0	8-2	$+\frac{3}{4}$	8-3	$-\frac{1}{5}$
9-1	$+\frac{1}{5}$	9-2	$-\frac{17}{14}$	9-3	$+\frac{4}{45}$
10-1	$-\frac{37}{6}$	10-2	$-\frac{13}{24}$	10-3	$-\frac{13}{10}$

$$7-1 \quad -4.7 + 2.1 = (-4.7) + (+2.1) = -2.6$$

$$\begin{aligned}
 7-2 \quad -6.4 - 2.6 & = (-6.4) - (+2.6) \\
 & = (-6.4) + (-2.6) = -9
 \end{aligned}$$

$$\begin{aligned}
 7-3 \quad 2.5 - 7.3 & = (+2.5) - (+7.3) \\
 & = (+2.5) + (-7.3) = -4.8
 \end{aligned}$$

$$8-1 \quad \frac{3}{4} - \frac{3}{4} = \left(+\frac{3}{4}\right) - \left(+\frac{3}{4}\right) = \left(+\frac{3}{4}\right) + \left(-\frac{3}{4}\right) = 0$$

$$\begin{aligned}
 8-2 \quad \frac{5}{6} - \frac{1}{12} & = \left(+\frac{5}{6}\right) - \left(+\frac{1}{12}\right) \\
 & = \left(+\frac{5}{6}\right) + \left(-\frac{1}{12}\right) \\
 & = \left(+\frac{10}{12}\right) + \left(-\frac{1}{12}\right) \\
 & = +\frac{9}{12} = +\frac{3}{4}
 \end{aligned}$$

$$\begin{aligned}
 8-3 \quad \frac{1}{2} - \frac{7}{10} & = \left(+\frac{1}{2}\right) - \left(+\frac{7}{10}\right) \\
 & = \left(+\frac{1}{2}\right) + \left(-\frac{7}{10}\right) \\
 & = \left(+\frac{5}{10}\right) + \left(-\frac{7}{10}\right) \\
 & = -\frac{2}{10} = -\frac{1}{5}
 \end{aligned}$$

$$9-1 \quad -\frac{3}{5} + \frac{4}{5} = \left(-\frac{3}{5}\right) + \left(+\frac{4}{5}\right) = +\frac{1}{5}$$

$$\begin{aligned}
 9-2 \quad -\frac{3}{2} + \frac{2}{7} & = \left(-\frac{3}{2}\right) + \left(+\frac{2}{7}\right) \\
 & = \left(-\frac{21}{14}\right) + \left(+\frac{4}{14}\right) = -\frac{17}{14}
 \end{aligned}$$

$$\begin{aligned}
 9-3 \quad -\frac{1}{9} + \frac{1}{5} & = \left(-\frac{1}{9}\right) + \left(+\frac{1}{5}\right) \\
 & = \left(-\frac{5}{45}\right) + \left(+\frac{9}{45}\right) = +\frac{4}{45}
 \end{aligned}$$

$$\begin{aligned} 10-1 \quad -\frac{9}{2}-\frac{5}{3} &= \left(-\frac{9}{2}\right)-\left(+\frac{5}{3}\right) \\ &= \left(-\frac{9}{2}\right)+\left(-\frac{5}{3}\right) \\ &= \left(-\frac{27}{6}\right)+\left(-\frac{10}{6}\right)=-\frac{37}{6} \end{aligned}$$

$$\begin{aligned} 10-2 \quad -\frac{1}{6}-\frac{3}{8} &= \left(-\frac{1}{6}\right)-\left(+\frac{3}{8}\right) \\ &= \left(-\frac{1}{6}\right)+\left(-\frac{3}{8}\right) \\ &= \left(-\frac{4}{24}\right)+\left(-\frac{9}{24}\right)=-\frac{13}{24} \end{aligned}$$

$$\begin{aligned} 10-3 \quad -\frac{1}{2}-\frac{4}{5} &= \left(-\frac{1}{2}\right)-\left(+\frac{4}{5}\right) \\ &= \left(-\frac{1}{2}\right)+\left(-\frac{4}{5}\right) \\ &= \left(-\frac{5}{10}\right)+\left(-\frac{8}{10}\right)=-\frac{13}{10} \end{aligned}$$

16 부호가 생략된 수의 계산(2)

p. 117 ~ p. 118

1-1 **방법 1** $-1, -1, -9, 0$

방법 2 $-9, 0$

2-1 1

2-2 -6

3-1 27

3-2 -19

4-1 0

4-2 -10

5-1 -6

5-2 -4

6-1 -3.2

6-2 6

7-1 4.5

7-2 $-\frac{10}{3}$

8-1 $\frac{5}{2}$

8-2 $-\frac{19}{6}$

9-1 $-\frac{11}{12}$

9-2 $-\frac{17}{12}$

10-1 -3

10-2 11

11-1 $-\frac{1}{12}$

11-2 $\frac{1}{12}$

12-1 $-\frac{3}{10}$

12-2 5

2-1 $6-9+4=6+4-9=10-9=1$

2-2 $-8-5+7=-13+7=-6$

3-1 $4-12+35=4+35-12=39-12=27$

3-2 $10-13-16=10-29=-19$

4-1 $8-3-6+1=8+1-3-6=9-9=0$

4-2 $-7+5-3-5=-7-3-5+5=-15+5=-10$

5-1 $5-7-11+7=5+7-7-11=12-18=-6$

5-2 $4-6+7-9=4+7-6-9=11-15=-4$

6-1 $2.6-7.2+1.4=2.6+1.4-7.2=4-7.2=-3.2$

6-2 $3.2-4+6.8=3.2+6.8-4=10-4=6$

$$\begin{aligned} 7-1 \quad 0.5-\frac{9}{2}+8.5 &= 0.5-4.5+8.5 \\ &= 0.5+8.5-4.5 \\ &= 9-4.5 \\ &= 4.5 \end{aligned}$$

$$\begin{aligned} 7-2 \quad -\frac{2}{3}-5+\frac{7}{3} &= -\frac{2}{3}+\frac{7}{3}-5=\frac{5}{3}-5 \\ &= \frac{5}{3}-\frac{15}{3}=-\frac{10}{3} \end{aligned}$$

$$8-1 \quad 2-\frac{1}{3}+\frac{5}{6}=2-\frac{2}{6}+\frac{5}{6}=2+\frac{1}{2}=\frac{5}{2}$$

$$\begin{aligned} 8-2 \quad \frac{1}{3}-\frac{5}{6}-\frac{8}{3} &= \frac{1}{3}-\frac{8}{3}-\frac{5}{6}=-\frac{7}{3}-\frac{5}{6} \\ &= -\frac{14}{6}-\frac{5}{6}=-\frac{19}{6} \end{aligned}$$

$$\begin{aligned} 9-1 \quad -\frac{1}{2}-\frac{2}{3}+\frac{1}{4} &= -\frac{6}{12}-\frac{8}{12}+\frac{3}{12} \\ &= -\frac{14}{12}+\frac{3}{12}=-\frac{11}{12} \end{aligned}$$

$$\begin{aligned} 9-2 \quad -\frac{5}{2}+\frac{7}{4}-\frac{2}{3} &= -\frac{5}{2}-\frac{2}{3}+\frac{7}{4} \\ &= -\frac{30}{12}-\frac{8}{12}+\frac{21}{12} \\ &= -\frac{38}{12}+\frac{21}{12}=-\frac{17}{12} \end{aligned}$$

10-1 $-5+7.4-1.2-4.2=-5+2=-3$

$$\begin{aligned} 10-2 \quad -1.7+10.5-6.3+8.5 &= -1.7-6.3+10.5+8.5 \\ &= -8+19 \\ &= 11 \end{aligned}$$

$$\begin{aligned} 11-1 \quad 1-\frac{1}{2}-\frac{1}{3}-\frac{1}{4} &= 1-\frac{6}{12}-\frac{4}{12}-\frac{3}{12} \\ &= 1-\frac{13}{12}=-\frac{1}{12} \end{aligned}$$

$$\begin{aligned} 11-2 \quad 2-\frac{1}{3}-\frac{7}{4}+\frac{1}{6} &= 2-\frac{4}{12}-\frac{21}{12}+\frac{2}{12} \\ &= 2-\frac{23}{12}=\frac{1}{12} \end{aligned}$$

$$\begin{aligned}
 12-1 \quad & -\frac{5}{2} + 2.5 + \frac{1}{5} - \frac{1}{2} = -\frac{5}{2} + \frac{5}{2} + \frac{1}{5} - \frac{1}{2} \\
 & = \frac{1}{5} - \frac{1}{2} = \frac{2}{10} - \frac{5}{10} \\
 & = -\frac{3}{10}
 \end{aligned}$$

$$\begin{aligned}
 12-2 \quad & 3.7 - \frac{1}{3} + 2.3 - \frac{2}{3} = 3.7 + 2.3 - \frac{1}{3} - \frac{2}{3} \\
 & = 6 - 1 \\
 & = 5
 \end{aligned}$$

17 어떤 수보다 ~만큼 큰 수, 작은 수 구하기 p. 119

1-1 $+ , 2$	1-2 $-9, 7$
2-1 4	2-2 9
3-1 4	3-2 -3
4-1 -1	4-2 -8
5-1 $-\frac{17}{10}$	5-2 $\frac{63}{40}$

2-1 -1 보다 5만큼 큰 수는 $-1 + 5 = 4$

2-2 2보다 -7 만큼 작은 수는
 $2 - (-7) = 2 + (+7) = 9$

3-1 7보다 -3 만큼 큰 수는 $7 + (-3) = 4$

3-2 -6 보다 -3 만큼 작은 수는
 $-6 - (-3) = -6 + (+3) = -3$

4-1 -9 보다 8만큼 큰 수는 $-9 + 8 = -1$

4-2 -2 보다 6만큼 작은 수는 $-2 - 6 = -8$

5-1 $-\frac{6}{5}$ 보다 $-\frac{1}{2}$ 만큼 큰 수는
 $-\frac{6}{5} + \left(-\frac{1}{2}\right) = -\frac{12}{10} + \left(-\frac{5}{10}\right) = -\frac{17}{10}$

5-2 $\frac{3}{8}$ 보다 $-\frac{6}{5}$ 만큼 작은 수는
 $\frac{3}{8} - \left(-\frac{6}{5}\right) = \frac{3}{8} + \left(+\frac{6}{5}\right)$
 $= \frac{15}{40} + \left(+\frac{48}{40}\right) = \frac{63}{40}$

STEP 2

기본연산 집중연습 | 15~17 p. 120 ~ p. 121

1-1 $>$	1-2 $=$
1-3 $>$	1-4 $>$

1-5 $>$	1-6 $<$
1-7 $>$	1-8 $>$
1-9 $>$	

2-1 $-\frac{17}{6}, -\frac{22}{45}$	2-2 $-\frac{11}{6}, \frac{2}{3}$
-------------------------------------	----------------------------------

2-3 $\frac{7}{15}, \frac{1}{28}$	2-4 $-\frac{7}{12}, -\frac{43}{30}$
----------------------------------	-------------------------------------

3-1 B, A	3-2 C, A, B
------------	---------------

3-3 C, B, A	3-4 A, B, C
---------------	---------------

3-5 A, C, B	3-6 A, C, B
---------------	---------------

1-1 $-4 + 9 = 5, 2 - 6 = -4$ 이므로
 $-4 + 9 > 2 - 6$

1-2 $-8 + 5 = -3, -2 - 1 = -3$ 이므로
 $-8 + 5 = -2 - 1$

1-3 $-30 + 30 = 0, -3 - 2 = -5$ 이므로
 $-30 + 30 > -3 - 2$

1-4 $3 - 7 = -4, -14 - 6 = -20$ 이므로
 $3 - 7 > -14 - 6$

1-5 $-1 + 15 = 14, 14 - 1 = 13$ 이므로
 $-1 + 15 > 14 - 1$

1-6 $2 - 7 = -5, -5 + 8 = 3$ 이므로
 $2 - 7 < -5 + 8$

1-7 $-8 + 5.1 = -2.9, -3.4 - 1.7 = -5.1$ 이므로
 $-8 + 5.1 > -3.4 - 1.7$

1-8 $-\frac{3}{4} - \frac{1}{2} = -\frac{5}{4}, \frac{7}{8} - \frac{5}{2} = -\frac{13}{8}$ 이고
 $-\frac{5}{4} = -\frac{10}{8}$ 이므로 $-\frac{3}{4} - \frac{1}{2} > \frac{7}{8} - \frac{5}{2}$

1-9 $-7.8 + 4.8 = -3, -6.3 + 1.8 = -4.5$ 이므로
 $-7.8 + 4.8 > -6.3 + 1.8$

3-1 $A = -3 - 9 + 5 = -12 + 5 = -7$
 $B = -3 - 3 = -6$
 $C = 1 + 2 - 7 = 3 - 7 = -4$
따라서 계산 결과가 큰 것부터 차례로 나열하면 C, B, A 이다.

3-2 $A = -17 + 12 = -5$
 $B = -3 - 7 + 4 = -10 + 4 = -6$
 $C = -5 - 2 + 3 + 6 = -7 + 9 = 2$
따라서 계산 결과가 큰 것부터 차례로 나열하면 C, A, B 이다.

3-3 $A=1.3-2.9=-1.6$
 $B=5.3+3.4-6.1=8.7-6.1=2.6$
 $C=0.5-5.5+8.5=0.5+8.5-5.5=9-5.5=3.5$
 따라서 계산 결과가 큰 것부터 차례로 나열하면 C, B, A 이다.

3-4 $A=1-2-\frac{4}{3}=-1-\frac{4}{3}=-\frac{7}{3}$
 $B=-\frac{12}{4}=-3$
 $C=-7-9+2+8=-16+10=-6$
 따라서 계산 결과가 큰 것부터 차례로 나열하면 A, B, C 이다.

3-5 $A=-\frac{5}{7}+\frac{12}{7}+3=1+3=4$
 $B=-\frac{5}{6}-\frac{2}{3}+\frac{1}{2}=-\frac{5}{6}-\frac{4}{6}+\frac{1}{2}=-\frac{3}{2}+\frac{1}{2}=-1$
 $C=\frac{5}{3}+\frac{5}{6}-\frac{7}{4}=\frac{10}{6}+\frac{5}{6}-\frac{7}{4}=\frac{5}{2}-\frac{7}{4}=\frac{3}{4}$
 따라서 계산 결과가 큰 것부터 차례로 나열하면 A, C, B 이다.

3-6 $A=1-\frac{6}{12}+\frac{3}{12}-\frac{4}{12}=1-\frac{7}{12}=\frac{5}{12}$
 $B=-\frac{10}{12}-\frac{9}{12}+\frac{6}{12}=-\frac{13}{12}$
 $C=3+4-8=7-8=-1$
 따라서 계산 결과가 큰 것부터 차례로 나열하면 A, C, B 이다.

STEP 1

18 유리수의 곱셈(1) : 부호가 같은 두 수 p. 122 ~ p. 123

1-1 $+, +12$	1-2 $+27$
2-1 $+24$	2-2 $+25$
3-1 $+21$	3-2 $+12$
4-1 $+7$	4-2 $+32$
5-1 $+1$	5-2 $+0.93$
6-1 $+\frac{5}{2}$	6-2 $+6$
7-1 $+\frac{3}{4}$	7-2 $+\frac{4}{5}$
8-1 $+7.5$	8-2 $+0.65$
9-1 $+6$	9-2 $+6$
10-1 $+\frac{3}{10}$	10-2 $+\frac{10}{3}$

19 유리수의 곱셈(2) : 부호가 다른 두 수 p. 124 ~ p. 125

1-1 $-, -27$	1-2 -42
2-1 -30	2-2 -64
3-1 -24	3-2 -54
4-1 -44	4-2 -49
5-1 -6	5-2 -21
6-1 -16.8	6-2 -9.6
7-1 -4	7-2 -10
8-1 $-\frac{1}{3}$	8-2 -12
9-1 $-\frac{1}{9}$	9-2 -8
10-1 $-\frac{3}{4}$	10-2 -6
11-1 0	11-2 0

20 곱셈의 계산 법칙 p. 126

1-1 $-2, -2, +10, +140$ (가) 곱셈의 교환법칙 (나) 곱셈의 결합법칙
1-2 $-2, -2, +2, -2, -4$ (가) 곱셈의 교환법칙 (나) 곱셈의 결합법칙
2-1 $-5, -5, +20, +220$, 교환, 결합
2-2 $-\frac{5}{2}, -\frac{5}{2}, +1, -\frac{4}{7}$, 교환, 결합

21 셋 이상의 유리수의 곱셈 p. 127 ~ p. 128

1-1 $+, +60$	1-2 -36
2-1 -80	2-2 $+700$
3-1 $+110$	3-2 -540
4-1 $+96$	4-2 -84
5-1 -48	5-2 $+112$
6-1 -540	6-2 0
7-1 $+39$	7-2 -15
8-1 $+\frac{9}{7}$	8-2 -8
9-1 $-\frac{1}{4}$	9-2 $+\frac{27}{2}$
10-1 -12	10-2 $+5$
11-1 $-\frac{1}{16}$	11-2 0

1-2 $(-6) \times (-3) \times (-2) = -(6 \times 3 \times 2) = -36$

2-1 $(+2) \times (-8) \times (+5) = -(2 \times 8 \times 5) = -80$

2-2 $(-25) \times (+7) \times (-4) = +(25 \times 7 \times 4) = +700$

$$3-1 \quad (+5) \times (-11) \times (-2) = +(5 \times 11 \times 2) = +110$$

$$3-2 \quad (-9) \times (-4) \times (-15) = -(9 \times 4 \times 15) = -540$$

$$4-1 \quad (-3) \times (-8) \times (+4) = +(3 \times 8 \times 4) = +96$$

$$4-2 \quad (-6) \times (+7) \times (+2) = -(6 \times 7 \times 2) = -84$$

$$5-1 \quad (-2) \times (+6) \times (-1) \times (-4) = -(2 \times 6 \times 1 \times 4) = -48$$

$$5-2 \quad (+7) \times (-8) \times (+2) \times (-1) = +(7 \times 8 \times 2 \times 1) = +112$$

$$6-1 \quad (-5) \times (-9) \times (-3) \times (+4) = -(5 \times 9 \times 3 \times 4) = -540$$

$$7-1 \quad (-15) \times (+13) \times \left(-\frac{1}{5}\right) = +\left(15 \times 13 \times \frac{1}{5}\right) = +39$$

$$7-2 \quad (-5) \times (-9) \times \left(-\frac{1}{3}\right) = -\left(5 \times 9 \times \frac{1}{3}\right) = -15$$

$$8-1 \quad (-2) \times \left(+\frac{1}{7}\right) \times \left(-\frac{9}{2}\right) = +\left(2 \times \frac{1}{7} \times \frac{9}{2}\right) = +\frac{9}{7}$$

$$8-2 \quad \left(-\frac{3}{5}\right) \times (-16) \times \left(-\frac{5}{6}\right) = -\left(\frac{3}{5} \times 16 \times \frac{5}{6}\right) = -8$$

$$9-1 \quad \left(-\frac{1}{6}\right) \times \left(-\frac{4}{3}\right) \times \left(-\frac{9}{8}\right) = -\left(\frac{1}{6} \times \frac{4}{3} \times \frac{9}{8}\right) = -\frac{1}{4}$$

$$9-2 \quad (-1.5) \times (-0.3) \times (+30) \\ = \left(-\frac{3}{2}\right) \times \left(-\frac{3}{10}\right) \times (+30) \\ = +\left(\frac{3}{2} \times \frac{3}{10} \times 30\right) = +\frac{27}{2}$$

$$10-1 \quad \left(+\frac{1}{4}\right) \times (+3) \times (-8) \times (+2) \\ = -\left(\frac{1}{4} \times 3 \times 8 \times 2\right) = -12$$

$$10-2 \quad \left(-\frac{1}{2}\right) \times (+3) \times \left(+\frac{5}{3}\right) \times (-2) \\ = +\left(\frac{1}{2} \times 3 \times \frac{5}{3} \times 2\right) = +5$$

$$11-1 \quad \left(-\frac{1}{3}\right) \times \left(+\frac{3}{4}\right) \times \left(-\frac{5}{4}\right) \times \left(-\frac{1}{5}\right) \\ = -\left(\frac{1}{3} \times \frac{3}{4} \times \frac{5}{4} \times \frac{1}{5}\right) = -\frac{1}{16}$$

STEP 2

기본연산 집중연습 | 18~21

p. 129 ~ p. 130

$$1-1 \quad -112$$

$$1-3 \quad -288$$

$$1-5 \quad +578$$

$$1-7 \quad -90$$

$$1-9 \quad +\frac{5}{4}$$

$$2-1 \quad +70$$

$$2-3 \quad -168$$

$$2-5 \quad +600$$

$$3-1 \quad -\frac{45}{4}$$

$$3-3 \quad -\frac{3}{14}$$

$$3-5 \quad +\frac{6}{5}$$

$$1-2 \quad -18$$

$$1-4 \quad +12$$

$$1-6 \quad +560$$

$$1-8 \quad +\frac{3}{5}$$

$$2-2 \quad -108$$

$$2-4 \quad -30$$

$$2-6 \quad +150$$

$$3-2 \quad +\frac{3}{2}$$

$$3-4 \quad +\frac{3}{32}$$

$$3-6 \quad +\frac{3}{32}$$

$$1-1 \quad \ominus = (+7) \times (+4) = +28$$

$$\oslash = (+4) \times (-1) = -4$$

$$\oplus = \ominus \times \oslash = (+28) \times (-4) = -112$$

$$1-2 \quad \ominus = (+6) \times (-1) = -6$$

$$\oslash = (-1) \times (-3) = +3$$

$$\oplus = \ominus \times \oslash = (-6) \times (+3) = -18$$

$$1-3 \quad \ominus = (+4) \times (-6) = -24$$

$$\oslash = (-6) \times (-2) = +12$$

$$\oplus = \ominus \times \oslash = (-24) \times (+12) = -288$$

$$1-4 \quad \ominus = (-1) \times (-2) = +2$$

$$\oslash = (-2) \times (-3) = +6$$

$$\oplus = \ominus \times \oslash = (+2) \times (+6) = +12$$

$$1-5 \quad \ominus = (-2) \times (+8.5) = -17$$

$$\oslash = (+8.5) \times (-4) = -34$$

$$\oplus = \ominus \times \oslash = (-17) \times (-34) = +578$$

$$1-6 \quad \ominus = (-3.2) \times (+5) = -16$$

$$\oslash = (+5) \times (-7) = -35$$

$$\oplus = \ominus \times \oslash = (-16) \times (-35) = +560$$

$$1-7 \quad \ominus = (-5) \times (-6) = +30$$

$$\oslash = (-6) \times \left(+\frac{1}{2}\right) = -3$$

$$\oplus = \ominus \times \oslash = (+30) \times (-3) = -90$$

$$\begin{aligned} 1-8 \quad \textcircled{A} &= \left(-\frac{3}{4}\right) \times \left(-\frac{2}{5}\right) = +\frac{3}{10} \\ \textcircled{B} &= \left(-\frac{2}{5}\right) \times (-5) = +2 \\ \textcircled{C} &= \textcircled{A} \times \textcircled{B} = \left(+\frac{3}{10}\right) \times (+2) = +\frac{3}{5} \end{aligned}$$

$$\begin{aligned} 1-9 \quad \textcircled{A} &= \left(-\frac{2}{9}\right) \times \left(+\frac{3}{4}\right) = -\frac{1}{6} \\ \textcircled{B} &= \left(+\frac{3}{4}\right) \times (-10) = -\frac{15}{2} \\ \textcircled{C} &= \textcircled{A} \times \textcircled{B} = \left(-\frac{1}{6}\right) \times \left(-\frac{15}{2}\right) = +\frac{5}{4} \end{aligned}$$

$$2-1 \quad (-2) \times (-7) \times (+5) = +(2 \times 7 \times 5) = +70$$

$$2-2 \quad (-3) \times (-4) \times (-9) = -(3 \times 4 \times 9) = -108$$

$$2-3 \quad (+4) \times (-6) \times (+7) = -(4 \times 6 \times 7) = -168$$

$$2-4 \quad (-2) \times (+3) \times (-5) \times (-1) = -(2 \times 3 \times 5 \times 1) = -30$$

$$2-5 \quad (-8) \times (+3) \times (+5) \times (-5) = +(8 \times 3 \times 5 \times 5) = +600$$

$$2-6 \quad (-3) \times (-5) \times (-1) \times (-10) = +(3 \times 5 \times 1 \times 10) = +150$$

$$3-1 \quad (-9) \times (-10) \times \left(-\frac{1}{8}\right) = -(9 \times 10 \times \frac{1}{8}) = -\frac{45}{4}$$

$$3-2 \quad \left(-\frac{3}{5}\right) \times \left(+\frac{5}{6}\right) \times (-3) = +\left(\frac{3}{5} \times \frac{5}{6} \times 3\right) = +\frac{3}{2}$$

$$3-3 \quad \left(+\frac{1}{4}\right) \times \left(-\frac{3}{2}\right) \times \left(+\frac{4}{7}\right) = -\left(\frac{1}{4} \times \frac{3}{2} \times \frac{4}{7}\right) = -\frac{3}{14}$$

$$\begin{aligned} 3-4 \quad &\left(-\frac{5}{6}\right) \times \left(-\frac{3}{8}\right) \times (+0.3) \\ &= \left(-\frac{5}{6}\right) \times \left(-\frac{3}{8}\right) \times \left(+\frac{3}{10}\right) \\ &= +\left(\frac{5}{6} \times \frac{3}{8} \times \frac{3}{10}\right) = +\frac{3}{32} \end{aligned}$$

$$\begin{aligned} 3-5 \quad &(-3) \times \left(-\frac{1}{2}\right) \times (-4) \times \left(-\frac{1}{5}\right) \\ &= +\left(3 \times \frac{1}{2} \times 4 \times \frac{1}{5}\right) = +\frac{6}{5} \end{aligned}$$

$$\begin{aligned} 3-6 \quad &\left(-\frac{3}{4}\right) \times (+0.1) \times (-2) \times \left(+\frac{5}{8}\right) \\ &= \left(-\frac{3}{4}\right) \times \left(+\frac{1}{10}\right) \times (-2) \times \left(+\frac{5}{8}\right) \\ &= +\left(\frac{3}{4} \times \frac{1}{10} \times 2 \times \frac{5}{8}\right) = +\frac{3}{32} \end{aligned}$$

STEP 1

22 거듭제곱의 계산

p. 131

1-1	9	1-2	9	1-3	-9
2-1	16	2-2	-16	2-3	-32
3-1	16	3-2	16	3-3	-16
4-1	-1	4-2	1	4-3	1
5-1	$\frac{1}{8}$	5-2	$-\frac{1}{8}$	5-3	$\frac{4}{25}$

$$4-1 \quad (-1)^3 = (-1) \times (-1) \times (-1) = -1$$

3개

$$4-2 \quad (-1)^4 = (-1) \times (-1) \times (-1) \times (-1) = 1$$

4개

$$4-3 \quad (-1)^{10} = (-1) \times (-1) \times \cdots \times (-1) = 1$$

10개

참고 $(-1)^{\text{짝수}} = 1, (-1)^{\text{홀수}} = -1$

23 거듭제곱을 포함한 곱셈

p. 132 ~ p. 133

1-1	4, -12	1-2	-16
2-1	-150	2-2	-32
3-1	64	3-2	36
4-1	-49	4-2	-1
5-1	-16	5-2	125
6-1	$-\frac{4}{9}$	6-2	$-\frac{1}{8}$
7-1	2	7-2	$\frac{4}{25}$
8-1	-32	8-2	-135
9-1	1	9-2	1
10-1	2	10-2	$-\frac{2}{3}$
11-1	$\frac{15}{8}$	11-2	18

$$1-2 \quad (-1) \times (-2)^4 = (-1) \times 16 = -16$$

$$2-1 \quad (-6) \times (-5)^2 = (-6) \times 25 = -150$$

$$2-2 \quad 4 \times (-2^3) = 4 \times (-8) = -32$$

$$3-1 \quad (-4)^2 \times 2^2 = 16 \times 4 = 64$$

$$3-2 \quad -3^2 \times (-2^2) = -9 \times (-4) = 36$$

$$4-1 \quad (-1)^5 \times (-7)^2 = (-1) \times 49 = -49$$

$$4-2 \quad (-1)^{20} \times (-1)^{19} = 1 \times (-1) = -1$$

$$5-1 \quad -1^5 \times (-4)^2 = -1 \times 16 = -16$$

$$5-2 \quad (-1)^9 \times (-5^3) = (-1) \times (-125) = 125$$

$$6-1 \quad (-1)^3 \times \left(-\frac{2}{3}\right)^2 = (-1) \times \frac{4}{9} = -\frac{4}{9}$$

$$6-2 \quad \left(-\frac{1}{2}\right)^3 \times (-1)^4 = \left(-\frac{1}{8}\right) \times 1 = -\frac{1}{8}$$

$$7-1 \quad \left(-\frac{1}{2}\right)^5 \times (-4)^3 = \left(-\frac{1}{32}\right) \times (-64) = 2$$

$$7-2 \quad \left(-\frac{2}{5}\right)^2 \times (-1)^6 = \frac{4}{25} \times 1 = \frac{4}{25}$$

$$8-1 \quad (-2) \times (-1)^2 \times 4^2 = (-2) \times 1 \times 16 = -32$$

$$8-2 \quad (-3)^3 \times (-1)^5 \times (-5) = (-27) \times (-1) \times (-5) \\ = -(27 \times 1 \times 5) \\ = -135$$

$$9-1 \quad (-1)^3 \times (-1)^4 \times (-1)^5 = (-1) \times 1 \times (-1) = 1$$

$$9-2 \quad -1^6 \times (-1)^7 \times (-1)^8 = -1 \times (-1) \times 1 = 1$$

$$10-1 \quad (-3)^2 \times \left(-\frac{2}{5}\right) \times \left(-\frac{5}{9}\right) = 9 \times \left(-\frac{2}{5}\right) \times \left(-\frac{5}{9}\right) \\ = +\left(9 \times \frac{2}{5} \times \frac{5}{9}\right) = 2$$

$$10-2 \quad \left(-\frac{3}{2}\right) \times (-1)^{10} \times \left(-\frac{2}{3}\right)^2 = \left(-\frac{3}{2}\right) \times 1 \times \frac{4}{9} = -\frac{2}{3}$$

$$11-1 \quad \left(-\frac{1}{4}\right)^2 \times (-5^2) \times \left(-\frac{6}{5}\right) = \frac{1}{16} \times (-25) \times \left(-\frac{6}{5}\right) \\ = +\left(\frac{1}{16} \times 25 \times \frac{6}{5}\right) = \frac{15}{8}$$

$$11-2 \quad \left(-\frac{1}{2}\right)^3 \times (-3^2) \times 2^4 = \left(-\frac{1}{8}\right) \times (-9) \times 16 \\ = +\left(\frac{1}{8} \times 9 \times 16\right) = 18$$

24 분배법칙

p. 134 ~ p. 135

$$1-1 \quad 100, 1, 1300, 13, 1313$$

$$2-1 \quad -2842$$

$$3-1 \quad -28$$

$$4-1 \quad 1$$

$$5-1 \quad 28, 2800$$

$$6-1 \quad 45000$$

$$7-1 \quad -480$$

$$8-1 \quad -1$$

$$9-1 \quad 350$$

$$10-1 \quad -250$$

$$11-1 \quad -12$$

$$1-2 \quad 17, 17, 1700, 34, 1666$$

$$2-2 \quad 3395$$

$$3-2 \quad -7$$

$$4-2 \quad 1$$

$$5-2 \quad -430$$

$$6-2 \quad -400$$

$$7-2 \quad -31$$

$$8-2 \quad 13$$

$$9-2 \quad -210$$

$$10-2 \quad -36$$

$$11-2 \quad 123$$

$$2-1 \quad 29 \times (-100 + 2) = 29 \times (-100) + 29 \times 2 \\ = -2900 + 58 = -2842$$

$$2-2 \quad (100 - 3) \times 35 = 100 \times 35 - 3 \times 35 \\ = 3500 - 105 = 3395$$

$$3-1 \quad (-12) \times \left(\frac{5}{6} + \frac{3}{2}\right) = (-12) \times \frac{5}{6} + (-12) \times \frac{3}{2} \\ = -10 + (-18) = -28$$

$$3-2 \quad \left(-\frac{3}{5} + \frac{1}{4}\right) \times 20 = -\frac{3}{5} \times 20 + \frac{1}{4} \times 20 \\ = -12 + 5 = -7$$

$$4-1 \quad 15 \times \left\{\frac{2}{5} + \left(-\frac{1}{3}\right)\right\} = 15 \times \frac{2}{5} + 15 \times \left(-\frac{1}{3}\right) \\ = 6 + (-5) = 1$$

$$4-2 \quad \left(\frac{7}{9} - \frac{5}{6}\right) \times (-18) = \frac{7}{9} \times (-18) - \frac{5}{6} \times (-18) \\ = -14 + 15 = 1$$

$$5-2 \quad -95 \times 43 + 85 \times 43 = (-95 + 85) \times 43 \\ = (-10) \times 43 = -430$$

$$6-1 \quad 45 \times 999 + 45 \times 1 = 45 \times (999 + 1) \\ = 45 \times 1000 = 45000$$

$$6-2 \quad 91 \times (-4) + 9 \times (-4) = (91 + 9) \times (-4) \\ = 100 \times (-4) = -400$$

$$7-1 \quad 24 \times (-7) + 24 \times (-13) = 24 \times \{(-7) + (-13)\} \\ = 24 \times (-20) = -480$$

$$7-2 \quad (-4) \times 3.1 + (-6) \times 3.1 = \{(-4) + (-6)\} \times 3.1 \\ = (-10) \times 3.1 = -31$$

$$\begin{aligned} 8-1 \quad & \left(-\frac{1}{6}\right) \times 2 + \left(-\frac{1}{6}\right) \times 4 = \left(-\frac{1}{6}\right) \times (2+4) \\ & = \left(-\frac{1}{6}\right) \times 6 = -1 \end{aligned}$$

$$\begin{aligned} 8-2 \quad & \left(-\frac{3}{7}\right) \times (-13) + \left(-\frac{4}{7}\right) \times (-13) \\ & = \left\{\left(-\frac{3}{7}\right) + \left(-\frac{4}{7}\right)\right\} \times (-13) \\ & = (-1) \times (-13) = 13 \end{aligned}$$

$$\begin{aligned} 9-1 \quad & 3.5 \times (-14) + 3.5 \times 114 = 3.5 \times (-14 + 114) \\ & = 3.5 \times 100 = 350 \end{aligned}$$

$$\begin{aligned} 9-2 \quad & 27 \times (-2.1) + 73 \times (-2.1) = (27+73) \times (-2.1) \\ & = 100 \times (-2.1) = -210 \end{aligned}$$

$$\begin{aligned} 10-1 \quad & 5 \times 12 - 5 \times 62 = 5 \times (12 - 62) \\ & = 5 \times (-50) = -250 \end{aligned}$$

$$\begin{aligned} 10-2 \quad & 6 \times (-18) - 4 \times (-18) = (6-4) \times (-18) \\ & = 2 \times (-18) = -36 \end{aligned}$$

$$\begin{aligned} 11-1 \quad & \frac{2}{5} \times 36 - \frac{2}{5} \times 66 = \frac{2}{5} \times (36 - 66) \\ & = \frac{2}{5} \times (-30) = -12 \end{aligned}$$

$$\begin{aligned} 11-2 \quad & 13.2 \times 12.3 - 3.2 \times 12.3 \\ & = (13.2 - 3.2) \times 12.3 \\ & = 10 \times 12.3 = 123 \end{aligned}$$

STEP 2

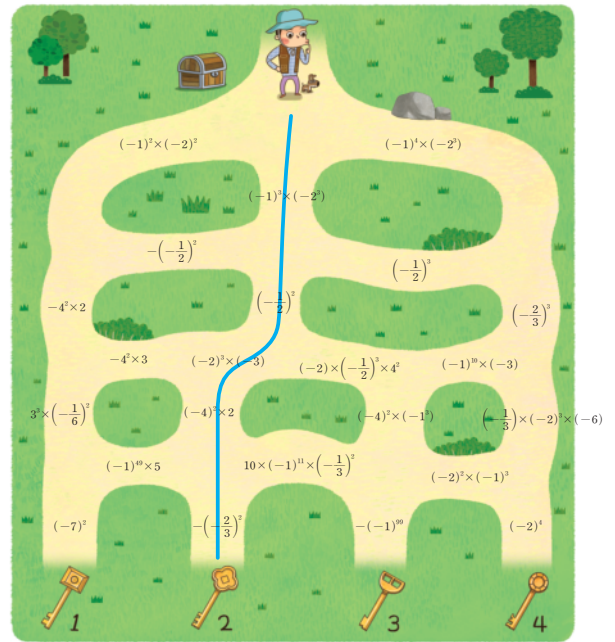
기본연산 집중연습 | 22~24

p. 136 ~ p. 137

1 2번 열쇠

2-1	1	2-2	-1
2-3	$-\frac{1}{27}$	2-4	$-\frac{1}{16}$
2-5	-4	2-6	-900
2-7	18	2-8	$\frac{5}{4}$
3-1	810	3-2	1023
3-3	-26	3-4	26
3-5	-12	3-6	314

1



$$\begin{aligned} 2-4 \quad & -\left(-\frac{1}{2}\right)^4 = -\left\{\left(-\frac{1}{2}\right) \times \left(-\frac{1}{2}\right) \times \left(-\frac{1}{2}\right) \times \left(-\frac{1}{2}\right)\right\} \\ & = -\frac{1}{16} \end{aligned}$$

$$2-5 \quad (-2)^2 \times (-1)^3 = 4 \times (-1) = -4$$

$$2-6 \quad -10^2 \times (-3)^2 = -100 \times 9 = -900$$

$$2-7 \quad (-1)^3 \times \left(-\frac{3}{2}\right)^2 \times (-2^3) = (-1) \times \frac{9}{4} \times (-8) = 18$$

$$2-8 \quad (-1)^5 \times \left(-\frac{1}{2}\right)^2 \times (-5) = (-1) \times \frac{1}{4} \times (-5) = \frac{5}{4}$$

$$3-1 \quad 45 \times (20 - 2) = 45 \times 20 - 45 \times 2 = 900 - 90 = 810$$

$$3-2 \quad (100 - 7) \times 11 = 100 \times 11 - 7 \times 11 = 1100 - 77 = 1023$$

$$\begin{aligned} 3-3 \quad & (-24) \times \left(-\frac{1}{6} + \frac{5}{4}\right) = (-24) \times \left(-\frac{1}{6}\right) + (-24) \times \frac{5}{4} \\ & = 4 + (-30) = -26 \end{aligned}$$

$$\begin{aligned} 3-4 \quad & \left(-\frac{4}{7} + \frac{3}{2}\right) \times 28 = -\frac{4}{7} \times 28 + \frac{3}{2} \times 28 \\ & = -16 + 42 = 26 \end{aligned}$$

$$\begin{aligned} 3-5 \quad & (-12) \times \frac{9}{5} - (-12) \times \frac{4}{5} = (-12) \times \left(\frac{9}{5} - \frac{4}{5}\right) \\ & = (-12) \times 1 = -12 \end{aligned}$$

$$\begin{aligned} 3-6 \quad & 108 \times 3.14 - 8 \times 3.14 = (108 - 8) \times 3.14 \\ & = 100 \times 3.14 = 314 \end{aligned}$$

25 나눗셈

p. 138

1-1 $\frac{5}{8}$	1-2 $\frac{3}{5}$
2-1 18	2-2 40
3-1 $\frac{3}{11}$	3-2 $\frac{3}{20}$
4-1 3	4-2 $\frac{4}{7}$
5-1 $\frac{35}{24}$	5-2 $\frac{49}{20}$

26 정수의 나눗셈(1) : 부호가 같은 두 수

p. 139

1-1 +, 4	1-2 8
2-1 4	2-2 5
3-1 9	3-2 7
4-1 4	4-2 6
5-1 $\frac{1}{4}$ 연구 8, $\frac{1}{4}$	5-2 $\frac{8}{9}$

27 정수의 나눗셈(2) : 부호가 다른 두 수

p. 140

1-1 -, -8	1-2 -3
2-1 -7	2-2 -12
3-1 -5	3-2 -1
4-1 0	4-2 0
5-1 $-\frac{4}{7}$	5-2 $-\frac{2}{5}$

28 역수

p. 141

1-1 $\frac{1}{3}$	1-2 4	1-3 10
2-1 $\frac{5}{4}$	2-2 $\frac{7}{2}$	2-3 $\frac{8}{9}$
3-1 $-\frac{4}{3}$	3-2 $-\frac{2}{3}$	3-3 -5
4-1 $-\frac{1}{3}$	4-2 -1	4-3 $-\frac{1}{4}$
5-1 -5	5-2 $\frac{10}{7}$	5-3 2

5-1 $-0.2 = -\frac{1}{5}$ 이므로 -0.2 의 역수는 -5 이다.

5-2 $0.7 = \frac{7}{10}$ 이므로 0.7 의 역수는 $\frac{10}{7}$ 이다.

5-3 $0.5 = \frac{1}{2}$ 이므로 0.5 의 역수는 2 이다.

29 역수를 이용한 나눗셈

p. 142 ~ p. 144

1-1 $\frac{1}{8}$	1-2 $-\frac{1}{15}$
2-1 $-\frac{2}{15}$	2-2 $\frac{3}{10}$
3-1 10	3-2 $-\frac{10}{3}$
4-1 $\frac{25}{4}$	4-2 -8
5-1 6	5-2 $-\frac{4}{3}$
6-1 $\frac{15}{7}$	6-2 $-\frac{2}{3}$
7-1 $-\frac{3}{2}$	7-2 -4
8-1 0	8-2 0
9-1 $-\frac{7}{4}$	9-2 $\frac{2}{3}$
10-1 -9	10-2 $\frac{3}{5}$
11-1 -6	11-2 $-\frac{6}{5}$
12-1 4	12-2 $-\frac{8}{5}$
13-1 16	13-2 $-\frac{1}{100}$
14-1 3	14-2 $\frac{5}{2}$
15-1 $\frac{3}{5}$	15-2 $-\frac{32}{27}$
16-1 $-\frac{5}{16}$	16-2 $-\frac{1}{8}$
17-1 $-\frac{1}{7}$	17-2 2

$$3-1 (+15) \div \left(+\frac{3}{2}\right) = (+15) \times \left(+\frac{2}{3}\right) = 10$$

$$3-2 (-4) \div \left(+\frac{6}{5}\right) = (-4) \times \left(+\frac{5}{6}\right) = -\frac{10}{3}$$

$$4-1 (-10) \div \left(-\frac{8}{5}\right) = (-10) \times \left(-\frac{5}{8}\right) = \frac{25}{4}$$

$$4-2 (+6) \div \left(-\frac{3}{4}\right) = (+6) \times \left(-\frac{4}{3}\right) = -8$$

$$5-1 \left(-\frac{4}{3}\right) \div \left(-\frac{2}{9}\right) = \left(-\frac{4}{3}\right) \times \left(-\frac{9}{2}\right) = 6$$

$$5-2 \left(+\frac{8}{9}\right) \div \left(-\frac{2}{3}\right) = \left(+\frac{8}{9}\right) \times \left(-\frac{3}{2}\right) = -\frac{4}{3}$$

$$6-1 \left(+\frac{6}{7}\right) \div \left(+\frac{2}{5}\right) = \left(+\frac{6}{7}\right) \times \left(+\frac{5}{2}\right) = \frac{15}{7}$$

$$6-2 \left(+\frac{3}{5}\right) \div \left(-\frac{9}{10}\right) = \left(+\frac{3}{5}\right) \times \left(-\frac{10}{9}\right) = -\frac{2}{3}$$

$$7-1 \quad \left(+\frac{3}{4}\right) \div \left(-\frac{1}{2}\right) = \left(+\frac{3}{4}\right) \times (-2) = -\frac{3}{2}$$

$$7-2 \quad \left(-\frac{2}{3}\right) \div \left(+\frac{1}{6}\right) = \left(-\frac{2}{3}\right) \times (+6) = -4$$

$$9-1 \quad \left(+\frac{5}{6}\right) \div \left(-\frac{10}{21}\right) = \left(+\frac{5}{6}\right) \times \left(-\frac{21}{10}\right) = -\frac{7}{4}$$

$$9-2 \quad \left(-\frac{3}{7}\right) \div \left(-\frac{9}{14}\right) = \left(-\frac{3}{7}\right) \times \left(-\frac{14}{9}\right) = \frac{2}{3}$$

$$10-1 \quad (+3.6) \div (-0.4) = \left(+\frac{18}{5}\right) \div \left(-\frac{2}{5}\right) \\ = \left(+\frac{18}{5}\right) \times \left(-\frac{5}{2}\right) = -9$$

$$10-2 \quad (-0.9) \div (-1.5) = \left(-\frac{9}{10}\right) \div \left(-\frac{3}{2}\right) \\ = \left(-\frac{9}{10}\right) \times \left(-\frac{2}{3}\right) = \frac{3}{5}$$

$$11-1 \quad (-1.2) \div \left(+\frac{1}{5}\right) = \left(-\frac{6}{5}\right) \div \left(+\frac{1}{5}\right) \\ = \left(-\frac{6}{5}\right) \times (+5) = -6$$

$$11-2 \quad (+2.8) \div \left(-\frac{7}{3}\right) = \left(+\frac{14}{5}\right) \div \left(-\frac{7}{3}\right) \\ = \left(+\frac{14}{5}\right) \times \left(-\frac{3}{7}\right) = -\frac{6}{5}$$

$$12-1 \quad (-56) \div (+2) \div (-7) = (-56) \times \left(+\frac{1}{2}\right) \times \left(-\frac{1}{7}\right) \\ = 4$$

$$12-2 \quad (-32) \div (-4) \div (-5) = (-32) \times \left(-\frac{1}{4}\right) \times \left(-\frac{1}{5}\right) \\ = -\frac{8}{5}$$

$$13-1 \quad (+8) \div \left(-\frac{1}{6}\right) \div (-3) = (+8) \times (-6) \times \left(-\frac{1}{3}\right) \\ = 16$$

$$13-2 \quad \left(+\frac{4}{5}\right) \div (-10) \div (+8) \\ = \left(+\frac{4}{5}\right) \times \left(-\frac{1}{10}\right) \times \left(+\frac{1}{8}\right) = -\frac{1}{100}$$

$$14-1 \quad (-175) \div (-35) \div \frac{5}{3} = (-175) \times \left(-\frac{1}{35}\right) \times \frac{3}{5} = 3$$

$$14-2 \quad (-6) \div \frac{3}{5} \div (-4) = (-6) \times \frac{5}{3} \times \left(-\frac{1}{4}\right) = \frac{5}{2}$$

$$15-1 \quad \left(-\frac{1}{5}\right) \div \frac{1}{2} \div \left(-\frac{2}{3}\right) = \left(-\frac{1}{5}\right) \times 2 \times \left(-\frac{3}{2}\right) = \frac{3}{5}$$

$$15-2 \quad \frac{4}{5} \div \left(-\frac{3}{4}\right) \div \frac{9}{10} = \frac{4}{5} \times \left(-\frac{4}{3}\right) \times \frac{10}{9} = -\frac{32}{27}$$

$$16-1 \quad \left(-\frac{3}{8}\right) \div \left(-\frac{6}{7}\right) \div \left(-\frac{7}{5}\right) = \left(-\frac{3}{8}\right) \times \left(-\frac{7}{6}\right) \times \left(-\frac{5}{7}\right) \\ = -\frac{5}{16}$$

$$16-2 \quad \frac{7}{10} \div \left(-\frac{6}{5}\right) \div \frac{14}{3} = \frac{7}{10} \times \left(-\frac{5}{6}\right) \times \frac{3}{14} = -\frac{1}{8}$$

$$17-1 \quad \left(+\frac{4}{7}\right) \div \left(-\frac{10}{3}\right) \div (+1.2) \\ = \left(+\frac{4}{7}\right) \times \left(-\frac{3}{10}\right) \times \left(+\frac{5}{6}\right) = -\frac{1}{7}$$

$$17-2 \quad \left(-\frac{4}{5}\right) \div \left(-\frac{2}{7}\right) \div (+1.4) \\ = \left(-\frac{4}{5}\right) \times \left(-\frac{7}{2}\right) \times \left(+\frac{5}{7}\right) = 2$$

30 유리수의 곱셈과 나눗셈의 혼합 계산(1)

p. 145

$$1-1 \quad -3$$

$$1-2 \quad -2$$

$$2-1 \quad 30$$

$$2-2 \quad 28$$

$$3-1 \quad -60$$

$$3-2 \quad 2$$

$$4-1 \quad 8$$

$$4-2 \quad -\frac{1}{3}$$

$$5-1 \quad 3$$

$$5-2 \quad 3$$

$$1-1 \quad (-12) \times (-2) \div (-8) = (+24) \div (-8) = -3$$

$$1-2 \quad (-4) \times (-3) \div (-6) = (+12) \div (-6) = -2$$

$$2-1 \quad 20 \div (-4) \times (-6) = (-5) \times (-6) = 30$$

$$2-2 \quad (-32) \div 8 \times (-7) = (-4) \times (-7) = 28$$

$$3-1 \quad (-4) \div \left(-\frac{6}{5}\right) \times (-18) = (-4) \times \left(-\frac{5}{6}\right) \times (-18) \\ = -60$$

$$3-2 \quad \left(-\frac{5}{6}\right) \times 4 \div \left(-\frac{5}{3}\right) = \left(-\frac{5}{6}\right) \times 4 \times \left(-\frac{3}{5}\right) = 2$$

$$4-1 \quad \frac{2}{3} \times (-9) \div \left(-\frac{3}{4}\right) = \frac{2}{3} \times (-9) \times \left(-\frac{4}{3}\right) = 8$$

$$4-2 \quad \left(-\frac{3}{14}\right) \div \left(-\frac{1}{7}\right) \times \left(-\frac{2}{9}\right) \\ = \left(-\frac{3}{14}\right) \times (-7) \times \left(-\frac{2}{9}\right) = -\frac{1}{3}$$

$$5-1 \quad \left(-\frac{4}{5}\right) \times \frac{10}{3} \div \left(-\frac{8}{9}\right) = \left(-\frac{4}{5}\right) \times \frac{10}{3} \times \left(-\frac{9}{8}\right) = 3$$

$$5-2 \quad \frac{4}{3} \div \left(-\frac{7}{6}\right) \times \left(-\frac{21}{8}\right) = \frac{4}{3} \times \left(-\frac{6}{7}\right) \times \left(-\frac{21}{8}\right) = 3$$

31 유리수의 곱셈과 나눗셈의 혼합 계산(2)
: 거듭제곱 포함

p. 146 ~ p. 147

$$1-1 \quad -1$$

$$1-2 \quad 4$$

$$2-1 \quad 1$$

$$2-2 \quad 1$$

$$3-1 \quad -\frac{9}{2}$$

$$3-2 \quad -\frac{27}{4}$$

$$4-1 \quad -36$$

$$4-2 \quad -500$$

$$5-1 \quad -\frac{8}{3}$$

$$5-2 \quad -15$$

$$6-1 \quad 3$$

$$6-2 \quad -\frac{1}{20}$$

$$7-1 \quad 256$$

$$7-2 \quad 2$$

$$8-1 \quad -3$$

$$8-2 \quad -2$$

$$9-1 \quad -\frac{1}{2}$$

$$9-2 \quad \frac{1}{4}$$

$$10-1 \quad \frac{2}{5}$$

$$10-2 \quad -\frac{5}{18}$$

$$11-1 \quad \frac{3}{4}$$

$$11-2 \quad -\frac{25}{6}$$

$$12-1 \quad \frac{1}{6}$$

$$12-2 \quad 24$$

$$1-1 \quad 2^3 \div (-2)^3 = 8 \div (-8) = -1$$

$$1-2 \quad (-2)^4 \div (-2)^2 = 16 \div 4 = 4$$

$$2-1 \quad (-1)^3 \div (-1)^5 = (-1) \div (-1) = 1$$

$$2-2 \quad (-1)^4 \div (-1)^2 = 1 \div 1 = 1$$

$$3-1 \quad (-3)^2 \div (-2) = 9 \div (-2) = -\frac{9}{2}$$

$$3-2 \quad -3^3 \div (-2)^2 = -27 \div 4 = -\frac{27}{4}$$

$$4-1 \quad (-4)^2 \div (-2^2) \times 3^2 = 16 \div (-4) \times 9 \\ = (-4) \times 9 = -36$$

$$4-2 \quad (-5)^3 \times (-2)^2 \div (-1)^{10} = (-125) \times 4 \div 1 = -500$$

$$5-1 \quad (-2)^3 \div (-3)^2 \times 3 = (-8) \div 9 \times 3 \\ = (-8) \times \frac{1}{9} \times 3 = -\frac{8}{3}$$

$$5-2 \quad (-6) \times (-5^2) \div (-10) = (-6) \times (-25) \times \left(-\frac{1}{10}\right) \\ = -15$$

$$6-1 \quad (-3)^2 \times (-4) \div (-12) = 9 \times (-4) \times \left(-\frac{1}{12}\right) = 3$$

$$6-2 \quad (-2)^2 \div 8 \div (-10) = 4 \times \frac{1}{8} \times \left(-\frac{1}{10}\right) = -\frac{1}{20}$$

$$7-1 \quad (-8) \div \left(-\frac{1}{2}\right) \times 4^2 = (-8) \times (-2) \times 16 = 256$$

$$7-2 \quad \frac{4}{5} \div (-2)^2 \times 10 = \frac{4}{5} \div 4 \times 10 = \frac{4}{5} \times \frac{1}{4} \times 10 = 2$$

$$8-1 \quad \left(-\frac{1}{2}\right)^2 \times 3 \div \left(-\frac{1}{4}\right) = \frac{1}{4} \times 3 \times (-4) = -3$$

$$8-2 \quad -1^2 \div \left(-\frac{6}{5}\right) \times \left(-\frac{12}{5}\right) = -1 \times \left(-\frac{5}{6}\right) \times \left(-\frac{12}{5}\right) \\ = -2$$

$$9-1 \quad \frac{5}{16} \div \left(-\frac{1}{2}\right)^2 \times \left(-\frac{2}{5}\right) = \frac{5}{16} \div \frac{1}{4} \times \left(-\frac{2}{5}\right) \\ = \frac{5}{16} \times 4 \times \left(-\frac{2}{5}\right) = -\frac{1}{2}$$

$$9-2 \quad (-1)^2 \div \left(-\frac{2}{3}\right)^2 \times \left(-\frac{1}{3}\right)^2 = 1 \div \frac{4}{9} \times \frac{1}{9} \\ = 1 \times \frac{9}{4} \times \frac{1}{9} = \frac{1}{4}$$

$$10-1 \quad \frac{2}{5} \times \left(-\frac{3}{2}\right)^2 \div \frac{9}{4} = \frac{2}{5} \times \frac{9}{4} \times \frac{4}{9} = \frac{2}{5}$$

$$10-2 \quad \left(-\frac{5}{2}\right)^3 \times \left(\frac{2}{3}\right)^2 \div (-5)^2 = \left(-\frac{125}{8}\right) \times \frac{4}{9} \div 25 \\ = \left(-\frac{125}{8}\right) \times \frac{4}{9} \times \frac{1}{25} \\ = -\frac{5}{18}$$

$$11-1 \quad \left(-\frac{1}{2}\right)^3 \div \left(-\frac{3}{2}\right) \div \frac{1}{9} = \left(-\frac{1}{8}\right) \times \left(-\frac{2}{3}\right) \times 9 = \frac{3}{4}$$

$$11-2 \quad \frac{8}{3} \div (-4) \div \left(-\frac{2}{5}\right)^2 = \frac{8}{3} \div (-4) \div \frac{4}{25} \\ = \frac{8}{3} \times \left(-\frac{1}{4}\right) \times \frac{25}{4} = -\frac{25}{6}$$

$$12-1 \quad \frac{5}{12} \times (+3.6) \div (-3)^2 = \frac{5}{12} \times \left(+\frac{18}{5}\right) \div 9 \\ = \frac{5}{12} \times \left(+\frac{18}{5}\right) \times \frac{1}{9} = \frac{1}{6}$$

$$12-2 \quad (-0.8) \times (-2)^3 \div \frac{4}{15} = \left(-\frac{4}{5}\right) \times (-8) \times \frac{15}{4} = 24$$

STEP 2

기본연산 집중연습 | 25~31

p. 148 ~ p. 149

1-1	2	1-2	-3
1-3	5	1-4	-6
1-5	0	1-6	0
2-1	$\frac{1}{5}$	2-2	-6
2-3	$\frac{4}{3}$	2-4	$-\frac{2}{7}$
3-1	$-\frac{9}{2}$	3-2	21
3-3	$\frac{5}{18}$	3-4	$-\frac{5}{6}$
3-5	$-\frac{2}{3}$	3-6	$\frac{5}{6}$
4	하연		

4 동환 : $(-2) \times \left(-\frac{5}{8}\right) \div \left(-\frac{7}{4}\right)$

$$= (-2) \times \left(-\frac{5}{8}\right) \times \left(-\frac{4}{7}\right)$$

$$= -\left(2 \times \frac{5}{8} \times \frac{4}{7}\right) = -\frac{5}{7}$$

지혜 : $\left(-\frac{8}{15}\right) \div \left(-\frac{9}{2}\right) \div \left(-\frac{4}{5}\right)$

$$= \left(-\frac{8}{15}\right) \times \left(-\frac{2}{9}\right) \times \left(-\frac{5}{4}\right)$$

$$= -\left(\frac{8}{15} \times \frac{2}{9} \times \frac{5}{4}\right) = -\frac{4}{27}$$

현은 : $\frac{1}{3} \times (-0.5) \div \left(-\frac{3}{8}\right)$

$$= \frac{1}{3} \times \left(-\frac{1}{2}\right) \times \left(-\frac{8}{3}\right)$$

$$= +\left(\frac{1}{3} \times \frac{1}{2} \times \frac{8}{3}\right) = \frac{4}{9}$$

준인 : $(-2)^3 \times 5 \div (-4)$

$$= (-8) \times 5 \times \left(-\frac{1}{4}\right)$$

$$= +\left(8 \times 5 \times \frac{1}{4}\right) = 10$$

은호 : $(-3)^2 \times (-2^2) \div (-6)$

$$= 9 \times (-4) \times \left(-\frac{1}{6}\right)$$

$$= +\left(9 \times 4 \times \frac{1}{6}\right) = 6$$

하연 : $(-1)^5 \div \left(-\frac{2}{3}\right) \times \frac{5}{6}$

$$= (-1) \div \frac{4}{9} \times \frac{5}{6}$$

$$= (-1) \times \frac{9}{4} \times \frac{5}{6} = -\frac{15}{8}$$

따라서 계산 결과가 가장 작은 학생은 하연이므로 심부름을 하게 되는 학생은 하연이다.

STEP 1

32 유리수의 덧셈, 뺄셈, 곱셈, 나눗셈의 혼합 계산(1)

p. 150 ~ p. 151

1-1	-14	1-2	-1
2-1	-3	2-2	14
3-1	-87	3-2	16
4-1	-6	4-2	364
5-1	43	5-2	9
6-1	-93	6-2	4
7-1	22	7-2	-35
8-1	8	8-2	-19
9-1	7	9-2	-14
10-1	-8	10-2	12

1-1 $(-2) + 4 \times (-3) = (-2) + (-12) = -14$

1-2 $13 + 2 \times (-7) = 13 + (-14) = -1$

2-1 $-7 - 12 \div (-3) = -7 - (-4) = -7 + (+4) = -3$

2-2 $12 - 8 \div (-4) = 12 - (-2) = 12 + (+2) = 14$

3-1 $9 - (-4)^2 \times 6 = 9 - 16 \times 6 = 9 - 96 = -87$

3-2 $12 - (-6)^2 \div (-9) = 12 - 36 \div (-9)$

$$= 12 - (-4)$$

$$= 12 + (+4) = 16$$

4-1 $-3^2 + (-6) \div (-2) = -9 + (+3) = -6$

4-2 $(-5)^2 \times 7 - (-7) \times 3^3 = 25 \times 7 - (-7) \times 27$

$$= 175 - (-189)$$

$$= 175 + (+189) = 364$$

5-1 $3 - (-4)^2 \div (3-1) \times (-5) = 3 - 16 \div 2 \times (-5)$

$$= 3 - 8 \times (-5)$$

$$= 3 - (-40)$$

$$= 3 + (+40) = 43$$

5-2 $(-1)^2 \times 5 - 16 \div (2-6) = 1 \times 5 - 16 \div (-4)$

$$= 5 - (-4)$$

$$= 5 + (+4) = 9$$

6-1 $3 \times \{-6 - (-5)^2\} = 3 \times (-6 - 25)$

$$= 3 \times (-31) = -93$$

6-2 $16 \div \{(-3) + 5\} - 4 = 16 \div 2 - 4$

$$= 8 - 4 = 4$$

$$\begin{aligned}
 \text{7-1 } 12 - \{3 \times (-4) - (-2)\} &= 12 - \{-12 + (+2)\} \\
 &= 12 - (-10) \\
 &= 12 + (+10) \\
 &= 22
 \end{aligned}$$

$$\begin{aligned}
 \text{7-2 } -5 - \{2 + (-7)\} \times (-6) &= -5 - (-5) \times (-6) \\
 &= -5 - 30 \\
 &= -35
 \end{aligned}$$

$$\begin{aligned}
 \text{8-1 } (-4^2) \div \{6 + (-2)^3\} &= (-16) \div \{6 + (-8)\} \\
 &= (-16) \div (-2) \\
 &= 8
 \end{aligned}$$

$$\begin{aligned}
 \text{8-2 } (-9) \div 3 + \{-7 - (-5)^2\} \div 2 \\
 &= (-3) + (-7 - 25) \div 2 \\
 &= (-3) + (-32) \div 2 \\
 &= (-3) + (-16) \\
 &= -19
 \end{aligned}$$

$$\begin{aligned}
 \text{9-1 } 30 - \{4 + (-3)^2 \times 4 - 17\} &= 30 - (4 + 9 \times 4 - 17) \\
 &= 30 - (4 + 36 - 17) \\
 &= 30 - 23 \\
 &= 7
 \end{aligned}$$

$$\begin{aligned}
 \text{9-2 } (-3) \times \{2 + 9 \div (-3)^2\} - 5 \\
 &= (-3) \times (2 + 9 \div 9) - 5 \\
 &= (-3) \times (2 + 1) - 5 \\
 &= (-3) \times 3 - 5 \\
 &= -9 - 5 \\
 &= -14
 \end{aligned}$$

$$\begin{aligned}
 \text{10-1 } 4 - \{-9 + (-3)^2 \times 5\} \div 3 \\
 &= 4 - (-9 + 9 \times 5) \div 3 \\
 &= 4 - (-9 + 45) \div 3 \\
 &= 4 - 36 \div 3 \\
 &= 4 - 12 \\
 &= -8
 \end{aligned}$$

$$\begin{aligned}
 \text{10-2 } 2 - [\{(-2)^3 - 14 \div 2\} + 5] \\
 &= 2 - [\{(-8) - 7\} + 5] \\
 &= 2 - \{(-15) + 5\} \\
 &= 2 - (-10) \\
 &= 2 + (+10) \\
 &= 12
 \end{aligned}$$

33 유리수의 덧셈, 뺄셈, 곱셈, 나눗셈의 혼합 계산(2)

p. 152 ~ p. 154

$$\text{1-1 } 13 \qquad \text{1-2 } 4$$

$$\text{2-1 } \frac{2}{9} \qquad \text{2-2 } 9$$

$$\text{3-1 } -6 \qquad \text{3-2 } \frac{1}{2}$$

$$\text{4-1 } -14 \qquad \text{4-2 } 12$$

$$\text{5-1 } \frac{13}{8} \qquad \text{5-2 } \frac{3}{8}$$

$$\text{6-1 } 4 \qquad \text{6-2 } \frac{83}{30}$$

$$\text{7-1 } -3 \qquad \text{7-2 } \frac{15}{4}$$

$$\text{8-1 } 3 \qquad \text{8-2 } \frac{7}{3}$$

$$\text{9-1 } 5 \qquad \text{9-2 } 76$$

$$\text{10-1 } \frac{28}{9} \qquad \text{10-2 } -\frac{2}{7}$$

$$\text{11-1 } -\frac{5}{2} \qquad \text{11-2 } 12$$

$$\text{1-1 } 9 - 6 \times \left(-\frac{2}{3}\right) = 9 - (-4) = 9 + (+4) = 13$$

$$\begin{aligned}
 \text{1-2 } \frac{1}{4} - (-3) \div \frac{4}{5} &= \frac{1}{4} - (-3) \times \frac{5}{4} \\
 &= \frac{1}{4} - \left(-\frac{15}{4}\right) \\
 &= \frac{1}{4} + \left(+\frac{15}{4}\right) \\
 &= \frac{16}{4} = 4
 \end{aligned}$$

$$\begin{aligned}
 \text{2-1 } (-3) \times \frac{1}{27} - (-3) \div 9 &= \left(-\frac{1}{9}\right) - \left(-\frac{1}{3}\right) \\
 &= \left(-\frac{1}{9}\right) + \left(+\frac{1}{3}\right) = \frac{2}{9}
 \end{aligned}$$

$$\begin{aligned}
 \text{2-2 } -9 \div \left(-\frac{3}{2}\right) - 6 \times \left(-\frac{1}{2}\right) \\
 &= -9 \times \left(-\frac{2}{3}\right) - 6 \times \left(-\frac{1}{2}\right) \\
 &= 6 - (-3) \\
 &= 6 + (+3) = 9
 \end{aligned}$$

$$\begin{aligned}
 \text{3-1 } 6 - (-3)^2 \div \frac{3}{4} &= 6 - 9 \div \frac{3}{4} \\
 &= 6 - 9 \times \frac{4}{3} \\
 &= 6 - 12 = -6
 \end{aligned}$$

$$\begin{aligned}
 \text{3-2 } \left(-\frac{1}{2}\right)^2 \times \frac{6}{5} - \left(-\frac{1}{5}\right) &= \frac{1}{4} \times \frac{6}{5} - \left(-\frac{1}{5}\right) \\
 &= \frac{3}{10} + \left(+\frac{1}{5}\right) \\
 &= \frac{5}{10} = \frac{1}{2}
 \end{aligned}$$

$$\begin{aligned} \text{4-1 } & \left(-\frac{1}{4}\right)^2 \times 16 - 9 \div \frac{3}{5} = \frac{1}{16} \times 16 - 9 \times \frac{5}{3} \\ & = 1 - 15 = -14 \end{aligned}$$

$$\begin{aligned} \text{4-2 } & \frac{1}{4} \div \left(-\frac{1}{2}\right)^3 - (-6) \times \frac{7}{3} = \frac{1}{4} \div \left(-\frac{1}{8}\right) - (-6) \times \frac{7}{3} \\ & = \frac{1}{4} \times (-8) - (-6) \times \frac{7}{3} \\ & = (-2) - (-14) \\ & = (-2) + (+14) \\ & = 12 \end{aligned}$$

$$\begin{aligned} \text{5-1 } & \frac{2}{3} \times \frac{9}{4} - \left(\frac{1}{2} - \frac{2}{3}\right) \div \frac{4}{3} = \frac{2}{3} \times \frac{9}{4} - \left(-\frac{1}{6}\right) \times \frac{3}{4} \\ & = \frac{3}{2} - \left(-\frac{1}{8}\right) \\ & = \frac{3}{2} + \left(+\frac{1}{8}\right) \\ & = \frac{13}{8} \end{aligned}$$

$$\begin{aligned} \text{5-2 } & \left(\frac{5}{3} - \frac{1}{6}\right)^2 \div \frac{2}{3} - 3 = \left(\frac{3}{2}\right)^2 \div \frac{2}{3} - 3 \\ & = \frac{9}{4} \times \frac{3}{2} - 3 \\ & = \frac{27}{8} - 3 \\ & = \frac{3}{8} \end{aligned}$$

$$\begin{aligned} \text{6-1 } & (-6)^2 \times \frac{5}{9} + 0.5 \times (-2^5) = 36 \times \frac{5}{9} + \frac{1}{2} \times (-32) \\ & = 20 + (-16) \\ & = 4 \end{aligned}$$

$$\begin{aligned} \text{6-2 } & \left(-\frac{1}{2} + \frac{1}{3}\right) \div 0.2 - 3^2 \div \left(-\frac{5}{2}\right) \\ & = \left(-\frac{1}{6}\right) \div \frac{1}{5} - 9 \div \left(-\frac{5}{2}\right) \\ & = \left(-\frac{1}{6}\right) \times 5 - 9 \times \left(-\frac{2}{5}\right) \\ & = \left(-\frac{5}{6}\right) - \left(-\frac{18}{5}\right) \\ & = \left(-\frac{5}{6}\right) + \left(+\frac{18}{5}\right) \\ & = \frac{83}{30} \end{aligned}$$

$$\begin{aligned} \text{7-1 } & \left\{15 - (15 - 27) \times \frac{1}{4}\right\} \div (-6) \\ & = \left\{15 - (-12) \times \frac{1}{4}\right\} \div (-6) \\ & = \{15 - (-3)\} \div (-6) \\ & = 18 \div (-6) \\ & = -3 \end{aligned}$$

$$\begin{aligned} \text{7-2 } & 3 + \frac{1}{2} \div \left\{(5-3) \times \left(-\frac{2}{3}\right) + 2\right\} \\ & = 3 + \frac{1}{2} \div \left\{2 \times \left(-\frac{2}{3}\right) + 2\right\} \\ & = 3 + \frac{1}{2} \div \left\{\left(-\frac{4}{3}\right) + 2\right\} \\ & = 3 + \frac{1}{2} \div \frac{2}{3} \\ & = 3 + \frac{1}{2} \times \frac{3}{2} \\ & = 3 + \frac{3}{4} \\ & = \frac{15}{4} \end{aligned}$$

$$\begin{aligned} \text{8-1 } & 5 - \left\{\left(\frac{1}{4} - \frac{2}{3}\right) \div \frac{5}{3}\right\} \times (-2)^3 \\ & = 5 - \left\{\left(-\frac{5}{12}\right) \times \frac{3}{5}\right\} \times (-8) \\ & = 5 - \left(-\frac{1}{4}\right) \times (-8) \\ & = 5 - 2 \\ & = 3 \end{aligned}$$

$$\begin{aligned} \text{8-2 } & 2 \times \left\{\left(-\frac{1}{2}\right)^2 \div \left(\frac{5}{6} - \frac{4}{3}\right) + 2\right\} - \frac{2}{3} \\ & = 2 \times \left\{\frac{1}{4} \div \left(-\frac{1}{2}\right) + 2\right\} - \frac{2}{3} \\ & = 2 \times \left\{\frac{1}{4} \times (-2) + 2\right\} - \frac{2}{3} \\ & = 2 \times \left\{\left(-\frac{1}{2}\right) + 2\right\} - \frac{2}{3} \\ & = 2 \times \frac{3}{2} - \frac{2}{3} \\ & = 3 - \frac{2}{3} \\ & = \frac{7}{3} \end{aligned}$$

$$\begin{aligned} \text{9-1 } & (-25) \div \left\{(-4)^2 \times \left(-\frac{1}{2}\right) - (-3)\right\} \\ & = (-25) \div \left\{16 \times \left(-\frac{1}{2}\right) - (-3)\right\} \\ & = (-25) \div \{(-8) + (+3)\} \\ & = (-25) \div (-5) \\ & = 5 \end{aligned}$$

$$\begin{aligned} \text{9-2 } & (-2)^2 - 3 \div \left\{\left(\frac{2}{3} - \frac{1}{2}\right) \div (-2^3)\right\} \\ & = 4 - 3 \div \left\{\left(\frac{2}{3} - \frac{1}{2}\right) \div (-4)\right\} \\ & = 4 - 3 \div \left\{\frac{1}{6} \div (-4)\right\} \\ & = 4 - 3 \div \left\{\frac{1}{6} \times \left(-\frac{1}{4}\right)\right\} \\ & = 4 - 3 \div \left(-\frac{1}{24}\right) \end{aligned}$$

$$\begin{aligned}
&= 4 - 3 \times (-24) \\
&= 4 - (-72) \\
&= 4 + (+72) = 76
\end{aligned}$$

$$\begin{aligned}
\text{10-1 } & 5 - \left[1 - \left\{ \frac{3}{4} - (-2)^2 \right\} \right] \times \frac{4}{9} \\
&= 5 - \left[1 - \left(\frac{3}{4} - 4 \right) \right] \times \frac{4}{9} \\
&= 5 - \left[1 - \left(-\frac{13}{4} \right) \right] \times \frac{4}{9} \\
&= 5 - \left[1 + \left(+\frac{13}{4} \right) \right] \times \frac{4}{9} \\
&= 5 - \frac{17}{4} \times \frac{4}{9} \\
&= 5 - \frac{17}{9} \\
&= \frac{28}{9}
\end{aligned}$$

$$\begin{aligned}
\text{10-2 } & (-2)^2 + 15 \div \left\{ (-3)^3 \times \frac{1}{18} - 2 \right\} \\
&= 4 + 15 \div \left\{ (-27) \times \frac{1}{18} - 2 \right\} \\
&= 4 + 15 \div \left\{ \left(-\frac{3}{2} \right) - 2 \right\} \\
&= 4 + 15 \div \left(-\frac{7}{2} \right) \\
&= 4 + 15 \times \left(-\frac{2}{7} \right) \\
&= 4 + \left(-\frac{30}{7} \right) \\
&= -\frac{2}{7}
\end{aligned}$$

$$\begin{aligned}
\text{11-1 } & 32 - 4 \times \left[5 - \left\{ \left(-\frac{3}{2} \right)^3 - \left(\frac{7}{4} - \frac{3}{2} \right) \right\} \right] \\
&= 32 - 4 \times \left[5 - \left\{ \left(-\frac{27}{8} \right) - \frac{1}{4} \right\} \right] \\
&= 32 - 4 \times \left[5 - \left(-\frac{29}{8} \right) \right] \\
&= 32 - 4 \times \frac{69}{8} \\
&= 32 - \frac{69}{2} \\
&= -\frac{5}{2}
\end{aligned}$$

$$\begin{aligned}
\text{11-2 } & \left(-\frac{4}{9} \right) \times \left[(-3)^3 - \left\{ 6 + (-2) \div \frac{1}{3} \right\} \right] \\
&= \left(-\frac{4}{9} \right) \times [(-27) - \{6 + (-2) \times 3\}] \\
&= \left(-\frac{4}{9} \right) \times \{(-27) - 0\} \\
&= \left(-\frac{4}{9} \right) \times (-27) \\
&= 12
\end{aligned}$$

STEP 2

기본연산 집중연습 | 32~33

p. 155 ~ p. 156

1-1	3	1-2	12
1-3	115	1-4	14
1-5	-3	1-6	20
1-7	-28	1-8	-5
1-9	8	1-10	-4
1-11	1	1-12	-2
2-1	$-\frac{1}{14}$	2-2	-14
2-3	$\frac{1}{15}$	2-4	13
2-5	12	2-6	3
2-7	19	2-8	$\frac{1}{2}$
2-9	6	2-10	-1

이상한 사람들이 모이는 곳은? 치과

$$\begin{aligned}
\text{1-1 } & -7 - 2 \times (-5) = -7 - (-10) \\
&= -7 + (+10) = 3
\end{aligned}$$

$$\begin{aligned}
\text{1-2 } & 24 \div (-8) - 5 \times (-3) = (-3) - (-15) \\
&= (-3) + (+15) = 12
\end{aligned}$$

$$\begin{aligned}
\text{1-3 } & 20 \times 3 - (-18 + 7) \times 5 = 60 - (-11) \times 5 \\
&= 60 - (-55) \\
&= 60 + (+55) = 115
\end{aligned}$$

$$\begin{aligned}
\text{1-4 } & 4^3 - (-5^2) \times (-2) = 64 - (-25) \times (-2) \\
&= 64 - 50 = 14
\end{aligned}$$

$$\begin{aligned}
\text{1-5 } & (-2)^3 \div 4 + (-1)^5 = (-8) \div 4 + (-1) \\
&= (-2) + (-1) = -3
\end{aligned}$$

$$\begin{aligned}
\text{1-6 } & 6 + 54 \div (-3)^2 - (-8) = 6 + 54 \div 9 + (+8) \\
&= 6 + 6 + (+8) \\
&= 20
\end{aligned}$$

$$\begin{aligned}
\text{1-7 } & -4 + 6 \times (21 - 5^2) = -4 + 6 \times (21 - 25) \\
&= -4 + 6 \times (-4) \\
&= -4 + (-24) \\
&= -28
\end{aligned}$$

$$\begin{aligned}
\text{1-8 } & 18 \div (-5 - 2^2) - 3 = 18 \div (-5 - 4) - 3 \\
&= 18 \div (-9) - 3 \\
&= (-2) - 3 \\
&= -5
\end{aligned}$$

$$\begin{aligned}
 \text{1-9 } 5 - \{3 + (2 - 6)\} \times 3 &= 5 - \{3 + (-4)\} \times 3 \\
 &= 5 - (-1) \times 3 \\
 &= 5 - (-3) \\
 &= 5 + (+3) = 8
 \end{aligned}$$

$$\begin{aligned}
 \text{1-10 } 9 \div \{-3^2 - 4 \times (-3)\} - 7 \\
 &= 9 \div \{-9 - (-12)\} - 7 \\
 &= 9 \div 3 - 7 \\
 &= 3 - 7 \\
 &= -4
 \end{aligned}$$

$$\begin{aligned}
 \text{1-11 } 7 - \{(-2)^3 + (4 - 9) \times 2\} \div (-3) \\
 &= 7 - \{(-8) + (-5) \times 2\} \div (-3) \\
 &= 7 - \{(-8) + (-10)\} \div (-3) \\
 &= 7 - (-18) \div (-3) \\
 &= 7 - 6 \\
 &= 1
 \end{aligned}$$

$$\begin{aligned}
 \text{1-12 } 15 - [3 - \{(-2)^3 - (-5) \div 5\} \times 2] \\
 &= 15 - [3 - \{(-8) - (-5) \div 5\} \times 2] \\
 &= 15 - [3 - \{(-8) - (-1)\} \times 2] \\
 &= 15 - \{3 - (-7) \times 2\} \\
 &= 15 - \{3 - (-14)\} \\
 &= 15 - 17 \\
 &= -2
 \end{aligned}$$

$$\text{2-1 } -\frac{5}{14} + \frac{6}{7} \times \frac{1}{3} = -\frac{5}{14} + \frac{2}{7} = -\frac{1}{14}$$

$$\begin{aligned}
 \text{2-2 } 6 \div \left(-\frac{3}{2}\right) + \frac{5}{2} \times (-4) &= 6 \times \left(-\frac{2}{3}\right) + \frac{5}{2} \times (-4) \\
 &= (-4) + (-10) = -14
 \end{aligned}$$

$$\begin{aligned}
 \text{2-3 } \frac{1}{6} - \left(-\frac{1}{4}\right)^2 \div \frac{5}{8} &= \frac{1}{6} - \frac{1}{16} \times \frac{8}{5} \\
 &= \frac{1}{6} - \frac{1}{10} \\
 &= \frac{5}{30} - \frac{3}{30} \\
 &= \frac{2}{30} = \frac{1}{15}
 \end{aligned}$$

$$\begin{aligned}
 \text{2-4 } \left(-\frac{3}{8}\right) \div \left(-\frac{1}{2}\right)^3 - (-2)^2 \times \left(-\frac{5}{2}\right) \\
 &= \left(-\frac{3}{8}\right) \div \left(-\frac{1}{8}\right) - 4 \times \left(-\frac{5}{2}\right) \\
 &= \left(-\frac{3}{8}\right) \times (-8) - 4 \times \left(-\frac{5}{2}\right) \\
 &= 3 - (-10) \\
 &= 3 + (+10) = 13
 \end{aligned}$$

$$\begin{aligned}
 \text{2-5 } \left\{12 - 6 \div \left(-\frac{2}{5}\right)\right\} \times \frac{4}{9} &= \left\{12 - 6 \times \left(-\frac{5}{2}\right)\right\} \times \frac{4}{9} \\
 &= \{12 - (-15)\} \times \frac{4}{9} \\
 &= 27 \times \frac{4}{9} \\
 &= 12
 \end{aligned}$$

$$\begin{aligned}
 \text{2-6 } -\frac{8}{3} \div \left\{-1 + \left(-\frac{1}{3}\right)^2\right\} &= -\frac{8}{3} \div \left(-1 + \frac{1}{9}\right) \\
 &= -\frac{8}{3} \div \left(-\frac{8}{9}\right) \\
 &= -\frac{8}{3} \times \left(-\frac{9}{8}\right) \\
 &= 3
 \end{aligned}$$

$$\begin{aligned}
 \text{2-7 } 7 \times \left\{3 - \left(-\frac{1}{2}\right)^2 \div \left(-\frac{7}{8}\right)\right\} - 4 \\
 &= 7 \times \left\{3 - \frac{1}{4} \times \left(-\frac{8}{7}\right)\right\} - 4 \\
 &= 7 \times \left\{3 - \left(-\frac{2}{7}\right)\right\} - 4 \\
 &= 7 \times \frac{23}{7} - 4 \\
 &= 23 - 4 = 19
 \end{aligned}$$

$$\begin{aligned}
 \text{2-8 } -\frac{1}{2} - \left\{-3 + \frac{9}{8} \times (-2)^3\right\} \times \frac{1}{12} \\
 &= -\frac{1}{2} - \left\{-3 + \frac{9}{8} \times (-8)\right\} \times \frac{1}{12} \\
 &= -\frac{1}{2} - \{-3 + (-9)\} \times \frac{1}{12} \\
 &= -\frac{1}{2} - (-12) \times \frac{1}{12} \\
 &= -\frac{1}{2} - (-1) \\
 &= -\frac{1}{2} + (+1) = \frac{1}{2}
 \end{aligned}$$

$$\begin{aligned}
 \text{2-9 } 36 - 24 \times \left\{(-1) + \left(-\frac{3}{2}\right)^2\right\} \\
 &= 36 - 24 \times \left\{(-1) + \frac{9}{4}\right\} \\
 &= 36 - 24 \times \frac{5}{4} \\
 &= 36 - 30 = 6
 \end{aligned}$$

$$\begin{aligned}
 \text{2-10 } 2 - \frac{9}{2} \times \left\{(-2)^2 \div 3 + 5 \times \left(-\frac{2}{15}\right)\right\} \\
 &= 2 - \frac{9}{2} \times \left\{4 \div 3 + 5 \times \left(-\frac{2}{15}\right)\right\} \\
 &= 2 - \frac{9}{2} \times \left\{\frac{4}{3} + \left(-\frac{2}{3}\right)\right\} \\
 &= 2 - \frac{9}{2} \times \frac{2}{3} \\
 &= 2 - 3 = -1
 \end{aligned}$$

- 1 (1) 13 (2) -7 (3) $-\frac{11}{8}$ (4) 6 (5) $\frac{3}{2}$
- 2 (1) -2 (2) 7 (3) $-\frac{41}{10}$ (4) 13.6 (5) 6 (6) $\frac{5}{12}$ (7) -5
- 3 (1) 10 (2) -9
- 4 (1) -8 (2) -4 (3) -3.3 (4) $-\frac{15}{4}$ (5) 3.1
- 5 (1) 18 (2) 14 (3) -6 (4) -0.6 (5) $\frac{4}{15}$
- 6 ㉠ 곱셈의 교환법칙 ㉡ 곱셈의 결합법칙
① $+6$ ② -24
- 7 (1) 7 (2) 230
- 8 (1) -1 (2) $\frac{3}{4}$ (3) $-\frac{5}{8}$ (4) $-\frac{10}{7}$
- 9 (1) -5 (2) 7 (3) $-\frac{3}{4}$ (4) $-\frac{1}{12}$ (5) $\frac{55}{6}$
- 10 (1) -1 (2) -1 (3) 72 (4) 30 (5) $\frac{1}{25}$
- 11 -7

$$\begin{aligned}
 2 \quad (6) & \left(-\frac{5}{6}\right) - \left(-\frac{2}{3}\right) - \left(-\frac{7}{12}\right) \\
 & = \left(-\frac{5}{6}\right) + \left(+\frac{2}{3}\right) + \left(+\frac{7}{12}\right) \\
 & = \left(-\frac{10}{12}\right) + \left(+\frac{8}{12}\right) + \left(+\frac{7}{12}\right) \\
 & = \frac{5}{12}
 \end{aligned}$$

- 4 (1) -2 보다 $+6$ 만큼 작은 수는
 $-2 - (+6) = -2 + (-6) = -8$
- (2) $+5$ 보다 -9 만큼 큰 수는
 $(+5) + (-9) = -4$
- (3) -4.3 보다 -1 만큼 작은 수는
 $-4.3 - (-1) = -4.3 + (+1) = -3.3$
- (4) $+\frac{3}{4}$ 보다 $-\frac{9}{2}$ 만큼 큰 수는
 $\left(+\frac{3}{4}\right) + \left(-\frac{9}{2}\right) = \left(+\frac{3}{4}\right) + \left(-\frac{18}{4}\right) = -\frac{15}{4}$
- (5) -2.8 보다 -5.9 만큼 작은 수는
 $-2.8 - (-5.9) = -2.8 + (+5.9) = 3.1$

$$\begin{aligned}
 7 \quad (1) & (-20) \times \left\{ \frac{2}{5} + \left(-\frac{3}{4}\right) \right\} \\
 & = (-20) \times \frac{2}{5} + (-20) \times \left(-\frac{3}{4}\right) \\
 & = (-8) + 15 = 7
 \end{aligned}$$

$$\begin{aligned}
 (2) \quad 13 \times 2.3 + 87 \times 2.3 & = (13 + 87) \times 2.3 \\
 & = 100 \times 2.3 = 230
 \end{aligned}$$

$$\begin{aligned}
 9 \quad (4) & (-3) \div \left(-\frac{9}{5}\right) \div (-20) \\
 & = (-3) \times \left(-\frac{5}{9}\right) \times \left(-\frac{1}{20}\right) \\
 & = -\left(3 \times \frac{5}{9} \times \frac{1}{20}\right) \\
 & = -\frac{1}{12} \\
 (5) & (-10) \div \left(+\frac{3}{2}\right) \times \left(-\frac{11}{8}\right) \\
 & = (-10) \times \left(+\frac{2}{3}\right) \times \left(-\frac{11}{8}\right) \\
 & = +\left(10 \times \frac{2}{3} \times \frac{11}{8}\right) \\
 & = \frac{55}{6}
 \end{aligned}$$

$$\begin{aligned}
 10 \quad (1) & -3^4 \div 3^4 = -81 \div 81 = -1 \\
 (2) & \frac{1}{27} \times (-3)^3 = \frac{1}{27} \times (-27) = -1 \\
 (3) & (-3)^2 \times (-1^3) \times (-2^3) = 9 \times (-1) \times (-8) \\
 & = 72 \\
 (4) & (-2) \div (-0.6) \times (-3)^2 = (-2) \times \left(-\frac{5}{3}\right) \times 9 \\
 & = 30 \\
 (5) & \left(-\frac{2}{3}\right) \times \left(-\frac{1}{6}\right) \div \left(-\frac{5}{3}\right)^2 \\
 & = \left(-\frac{2}{3}\right) \times \left(-\frac{1}{6}\right) \div \frac{25}{9} \\
 & = \left(-\frac{2}{3}\right) \times \left(-\frac{1}{6}\right) \times \frac{9}{25} \\
 & = \frac{1}{25}
 \end{aligned}$$

$$\begin{aligned}
 11 \quad & 4 - 6 \times \left\{ 2 - \frac{3}{2} \div (-3)^2 \right\} \\
 & = 4 - 6 \times \left(2 - \frac{3}{2} \div 9 \right) \\
 & = 4 - 6 \times \left(2 - \frac{3}{2} \times \frac{1}{9} \right) \\
 & = 4 - 6 \times \left(2 - \frac{1}{6} \right) \\
 & = 4 - 6 \times \frac{11}{6} \\
 & = 4 - 11 \\
 & = -7
 \end{aligned}$$