

1. $-\frac{2x+3}{5} - \frac{2x-7}{3}$ 을 간단히 하면?

① $-16x - 26$

② $-16x + 44$

③ $\frac{-x-26}{5}$

④ $\frac{16x+44}{15}$

⑤ $\frac{-16x+26}{15}$

해설

분모를 15 로 통분하면

$$\begin{aligned} -\frac{2x+3}{5} - \frac{2x-7}{3} &= \frac{-3(2x+3) - 5(2x-7)}{15} \\ &= \frac{-6x-9-10x+35}{15} \\ &= \frac{-16x+26}{15} \end{aligned}$$

2. $\frac{2x+3}{4} - \frac{x-2}{3}$ 를 간단히 하면?

① $2x+17$

② $2x+1$

③ $\frac{x+1}{7}$

④ $\frac{2x+17}{12}$

⑤ $\frac{2x+1}{12}$

해설

분모를 12 로 통분하면

$$\begin{aligned}\frac{3(2x+3)}{12} - \frac{4(x-2)}{12} &= \frac{3(2x+3) - 4(x-2)}{12} \\ &= \frac{2x+17}{12}\end{aligned}$$

3. $\frac{1}{2}$ 에 어떤 유리수를 더해야 할 것을 잘못해서 뺐더니 $\frac{5}{3}$ 가 나왔다.

바르게 계산한 결과는?

- ① $-\frac{2}{3}$
- ② $-\frac{13}{6}$
- ③ $-\frac{7}{6}$
- ④ $-\frac{5}{6}$
- ⑤ $-\frac{1}{6}$

해설

$$\frac{1}{2} - \square = \frac{5}{3}$$

$$\frac{3}{6} - \square = \frac{10}{6}$$

$$\square = -\frac{7}{6}$$

바르게 계산한 결과는

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

4. 다음 식을 계산하여라.

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

▶ 답 :

▷ 정답 : $-\frac{35}{12}x - \frac{13}{12}$

해설

$$\begin{aligned} & \frac{1-3x}{4} - \left\{ \frac{1}{2}(7x+4) - \frac{2(1+2x)}{3} \right\} \\ &= \frac{1-3x}{4} - \left(\frac{21x+12-4-8x}{6} \right) \\ &= \frac{1-3x}{4} - \frac{13x+8}{6} \\ &= \frac{3-9x-26x-16}{12} \\ &= -\frac{35}{12}x - \frac{13}{12} \end{aligned}$$

5. $A = x + 3$, $B = -2x + 5$ 일 때, $2A - (B - 2A)$ 를 간단히 하여라.

▶ 답 :

▷ 정답 : $6x + 7$

해설

$$\begin{aligned} & A = x + 3, B = -2x + 5 \\ & 2A - (B - 2A) \\ &= 2A - B + 2A \\ &= 4(x + 3) - (-2x + 5) \\ &= 4x + 12 + 2x - 5 \\ &= 6x + 7 \end{aligned}$$

6. $A = x - 1, B = -2x + 1$ 일 때, $A - (B - 2A)$ 를 간단히 하면?

① $6x + 7$

② $x - 3$

③ $-2x + 1$

④ $5x - 4$

⑤ $5x + 10$

해설

$$A = x - 1, B = -2x + 1$$

$$A - (B - 2A) = A - B + 2A$$

$$= 3A - B$$

$$= 3(x - 1) - (-2x + 1)$$

$$= 3x - 3 + 2x - 1$$

$$= 5x - 4$$