

2. $1\frac{3}{9}$ 에 어떤 분수를 더하였더니 $4\frac{8}{9}$ 이 되었습니다. 어떤 분수와 $1\frac{3}{9}$ 의 차는 얼마인지 구하시오.

- ① $5\frac{6}{9}$ ② $2\frac{5}{9}$ ③ $3\frac{5}{9}$ ④ $1\frac{8}{9}$ ⑤ $1\frac{6}{9}$

해설

어떤 분수를 \square 라고 하면,

$$1\frac{3}{9} + \square = 4\frac{8}{9}$$

$$\square = 4\frac{8}{9} - 1\frac{3}{9} = 3\frac{5}{9} \text{ 입니다.}$$

$$3\frac{5}{9} - 1\frac{8}{9} = 2\frac{14}{9} - 1\frac{8}{9} = 1\frac{6}{9}$$

3. 분모가 17인 세 진분수 \textcircled{A} , \textcircled{B} , \textcircled{C} 가 있습니다. 세 분수의 합은 $1\frac{10}{17}$ 이고, 세 분수의 분자는 \textcircled{A} 가 \textcircled{B} 보다 $\frac{2}{17}$ 가 작고, \textcircled{B} 도 \textcircled{C} 보다 $\frac{2}{17}$ 가 작다고 합니다. $\textcircled{B} + \textcircled{C} - \textcircled{A}$ 의 값을 구하시오.

▶ 답:

▶ 정답: $\frac{13}{17}$

해설

$$\textcircled{A} = \frac{\textcircled{A}}{17}, \textcircled{B} = \frac{\textcircled{B}}{17}, \textcircled{C} = \frac{\textcircled{C}}{17}$$

$$\frac{\textcircled{A}}{17} + \frac{\textcircled{B}}{17} + \frac{\textcircled{C}}{17} = \frac{\textcircled{A} + \textcircled{B} + \textcircled{C}}{17} = 1\frac{10}{17} = \frac{27}{17}$$

$$\textcircled{A} + \textcircled{B} + \textcircled{C} = 27$$

$$\textcircled{A} = \textcircled{B} - 2 \rightarrow \textcircled{C} = \textcircled{A} + 2$$

$$\textcircled{C} = \textcircled{C} - 2 \rightarrow \textcircled{A} + 2 = \textcircled{C} - 2 \rightarrow \textcircled{C} = \textcircled{A} + 4$$

$$\textcircled{A} + \textcircled{B} + \textcircled{C} = 27$$

$$\textcircled{A} + (\textcircled{A} + 2) + (\textcircled{A} + 4) = 27$$

$$\textcircled{A} + \textcircled{A} + \textcircled{A} + 6 = 27$$

$$\textcircled{A} + \textcircled{A} + \textcircled{A} = 21$$

$$\textcircled{A} = 7, \textcircled{B} = 9, \textcircled{C} = 11$$

$$\textcircled{A} = \frac{7}{17}, \textcircled{B} = \frac{9}{17}, \textcircled{C} = \frac{11}{17}$$

따라서 $\textcircled{B} + \textcircled{C} - \textcircled{A} = \frac{9}{17} + \frac{11}{17} - \frac{7}{17} = \frac{13}{17}$ 입니다.

4. 분모가 11인 세 분수 ㉠, ㉡, ㉢가 있습니다.

세 분수의 합은 $2\frac{5}{11}$ 이고, 세 분수의 분자는 ㉠가 ㉡보다 1 크고, ㉡가 ㉢보다 1 크다고 합니다.

㉡ + ㉢ - ㉠의 값을 구하시오.

▶ 답:

▶ 정답: $\frac{7}{11}$

해설

$$\begin{aligned} \text{㉠} &= \frac{\text{㉠}}{11}, \text{㉡} = \frac{\text{㉡}}{11}, \text{㉢} = \frac{\text{㉢}}{11} \\ \frac{\text{㉠}}{11} + \frac{\text{㉡}}{11} + \frac{\text{㉢}}{11} &= \frac{\text{㉠} + \text{㉡} + \text{㉢}}{11} = 2\frac{5}{11} = \frac{27}{11} \\ \text{㉠} + \text{㉡} + \text{㉢} &= 27 \\ \text{㉠} &= \text{㉡} + 1 \rightarrow \text{㉡} = \text{㉠} - 1 \\ \text{㉡} &= \text{㉢} + 1 \rightarrow \text{㉠} - 1 = \text{㉢} + 1 \rightarrow \text{㉢} = \text{㉠} - 2 \\ \text{㉠} + \text{㉡} + \text{㉢} &= 27 \\ \text{㉠} + (\text{㉠} - 1) + (\text{㉠} - 2) &= 27 \\ \text{㉠} + \text{㉠} + \text{㉠} - 3 &= 27 \\ \text{㉠} + \text{㉠} + \text{㉠} &= 30 \\ \text{㉠} &= 30 \div 3 = 10, \text{㉡} = 9, \text{㉢} = 8 \\ \text{㉠} &= \frac{10}{11}, \text{㉡} = \frac{9}{11}, \text{㉢} = \frac{8}{11} \\ \text{따라서 } \text{㉡} + \text{㉢} - \text{㉠} &= \frac{9}{11} + \frac{8}{11} - \frac{10}{11} = \frac{7}{11} \text{ 입니다.} \end{aligned}$$