

11

分数の計算

解答と解説

解答

①

□(1) $\frac{1}{7}$

□(2) $\frac{2}{3}$

□(3) ア 12 イ 12

□(4) ア $\frac{1}{3}$ イ $\frac{1}{6}$

□(5) ア $\frac{1}{6}$ イ $\frac{7}{11}$

②

□(1) $\frac{5}{6}$

□(2) $\frac{2}{3}$

□(3) 11

□(4) 14

□(5) 5

③

□(1) $\frac{11}{30}$

□(2) $\frac{1}{24}$

□(3) $\frac{3}{14}$

□(4) $\frac{1}{8}$

□(5) $\frac{3}{28}$

□(6) 2

□(7) $\frac{3}{5}$

□(8) $\frac{1}{12}$

□(9) $\frac{4}{3}$

□(10) $\frac{2}{3}$

解説

*分数でも次のきまりが成り立つ

●たし算

$$\square + \bigcirc = \bigcirc + \square$$

$$(\square + \bigcirc) + \triangle = \square + (\bigcirc + \triangle)$$

●かけ算

$$\square \times \bigcirc = \bigcirc \times \square$$

$$(\square \times \bigcirc) \times \triangle = \square \times (\bigcirc \times \triangle)$$

●()を使った計算

$$(\square + \bigcirc) \times \triangle = \square \times \triangle + \bigcirc \times \triangle$$

$$(\square - \bigcirc) \times \triangle = \square \times \triangle - \bigcirc \times \triangle$$



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

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

$$\begin{aligned} (3) & \left(\frac{3}{4} + \frac{1}{6} \right) \times 12 \\ & = \frac{3}{4} \times 12 + \frac{1}{6} \times 12 \\ & = 9 + 2 \\ & = 11 \end{aligned}$$

$$\begin{aligned} (4) & \left(\frac{2}{5} - \frac{1}{6} \right) \times 60 \\ & = \frac{2}{5} \times 60 - \frac{1}{6} \times 60 \\ & = 24 - 10 \\ & = 14 \end{aligned}$$

$$\begin{aligned} (5) & 42 \times \left(\frac{4}{21} - \frac{1}{14} \right) \\ & = 42 \times \frac{4}{21} - 42 \times \frac{1}{14} \\ & = 8 - 3 \\ & = 5 \end{aligned}$$

$$\begin{aligned} \textcircled{3} (1) & \frac{1}{5} + \frac{1}{2} - \frac{1}{3} \\ & = \frac{6}{30} + \frac{15}{30} - \frac{10}{30} \\ & = \frac{11}{30} \end{aligned}$$

$$\begin{aligned} (6) & \frac{3}{8} \div \frac{3}{5} \div \frac{5}{16} \\ & = \frac{3 \times 5 \times 16^2}{1 \times 8 \times 3 \times 5} \\ & = 2 \end{aligned}$$

$$\begin{aligned} (7) & \left(\frac{5}{6} + \frac{2}{3} \right) \times \frac{2}{5} \\ & = \left(\frac{5}{6} + \frac{4}{6} \right) \times \frac{2}{5} \\ & = \frac{3 \times 2}{2 \times 6} \times \frac{2}{5} \\ & = \frac{3 \times 2^1}{1 \times 2 \times 5} = \frac{3}{5} \end{aligned}$$