

中学入試用計算問題集(第85回)

試験時間 7分

()月()日()曜日

① $0.4 \div \frac{1}{5} \div \frac{1}{3} + 0.75 \times \frac{4}{9} = (\quad)$

② $4.6 \times 7 \div 2.4 \times 6 \div (\quad) = 3.5$

③ $1\frac{1}{7} - (1\frac{7}{8} \times \frac{4}{9} - 0.5 \div \quad) = \frac{23}{63} = (\quad)$

中学入試用計算問題集(第86回)

試験時間 7分

()月()日()曜日

① $100 - \{ 100 - (100 -) \times \frac{1}{2} \} \times \frac{1}{3} = 70$ = ()

② $\frac{13}{36} + 2\frac{1}{3} \div 1\frac{1}{3} - 5\frac{5}{6} \times \frac{4}{21} = ()$

③ $(0.5 - 0.125) \times 2\frac{2}{3} \div (\frac{1}{3} +) = 2\frac{4}{7}$ = ()

中学入試用計算問題集(第87回)

試験時間 7分

()月()日()曜日

① $2 - \left(-\frac{4}{5} \right) \div 0.125 = \frac{3}{5}$ = ()

② $\left(1 - \frac{9}{25} \right) \div 0.8 \times 1.25 - \left(\frac{2}{15} - 0.002 \right) \times 3 = ()$

③ $3.9 \times 6 \times 16.5 \div (1.5 \times 1.3 \times 1.2) = ()$

中学入試用計算問題集(第88回)

試験時間 7分

()月()日()曜日

① $2.75 - (1\frac{7}{20} - 0.85 \div 1.7) \div 0.72 = (\quad)$

② $1.4 \times (2.3 - \quad \times 2) = 2.1 \quad = (\quad)$

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

中学入試用計算問題集(第89回)

試験時間 7分

()月()日()曜日

① $308 - [168 \div \{36 - (70 \div 5 - 2)\}] = (\quad)$

② $3.1 \times 0.7 + (5.21 - 1.778) \div 0.6 = (\quad)$

③ $0.1 \div 0.01 \times 0.001 \div 0.0001 \times 0.00001 \div 0.000001 = (\quad)$

中学入試用計算問題集(第90回)

試験時間 7分

()月()日()曜日

① $(3\frac{1}{4} - 3) + (4\frac{2}{3} \times 0.3 - \frac{4}{7} \div \frac{5}{6}) \times \frac{1}{4} = (\quad)$

② $2.34 \div 9 + 3.42 \div 9 + 4.23 \div 9 = (\quad)$

③ $25.2 - \{ 17.2 - (13.9 + 5.6) \div 1.5 \} \times 4.5 = (\quad)$

中学入試用計算問題集(第85回) 解答と解き方

【解答】

① $6\frac{1}{3}$

② $2\frac{3}{10}$ (2.3)

③ 9

【解き方】

① $0.75 = \frac{3}{4}$ は、しっかり覚えておくこと。

$$0.4 \div \frac{1}{5} \div \frac{1}{3} = \frac{4}{10} \div \frac{1}{5} \div \frac{1}{3} = \frac{2}{5} \div \frac{1}{5} \div \frac{1}{3} = \frac{2 \times \cancel{5}^1 \times 3}{5 \times 1 \times 1} = \frac{6}{1} = 6$$

$$0.75 \times \frac{4}{9} = \frac{3}{4} \times \frac{4}{9} = \frac{\cancel{3}^1 \times \cancel{4}_3}{4 \times 9} = \frac{1}{3} \qquad 6 + \frac{1}{3} = 6\frac{1}{3}$$

② $4.6 \times 7 \div 2.4 \times 6$

$$= 4\frac{3}{5} \times 7 \div 2\frac{2}{5} \times 6$$

$$= \frac{23}{5} \times 7 \div \frac{12}{5} \times 6$$

$$= \frac{23 \times 7 \times \cancel{5}^1 \times \cancel{5}^1}{\cancel{5}_1 \times \cancel{12}_2} = \frac{161}{2}$$

$$= \frac{161}{2}$$

よって、 $\frac{161}{2} \div () = 35$ となるから、

$$() = \frac{161}{2} \div 35 = \frac{\cancel{161}^{23}}{2 \times \cancel{35}_5} = \frac{23}{10} = 2\frac{3}{10}$$

③ $1\frac{1}{7} - () = \frac{23}{63}$ $() = 1\frac{1}{7} - \frac{23}{63} = 1\frac{9}{63} - \frac{23}{63} = \frac{72}{63} - \frac{23}{63} = \frac{49}{63} = \frac{7}{9}$

$$1\frac{7}{8} \times \frac{4}{9} = \frac{15}{8} \times \frac{4}{9} = \frac{\cancel{15}^5 \times \cancel{4}_3}{8 \times 9} = \frac{5}{6} \quad \text{だから、} \quad \frac{5}{6} - 0.5 \div \quad = \frac{7}{9} \quad \text{となる。}$$

$$\frac{5}{6} - \frac{7}{9} = \frac{15}{18} - \frac{14}{18} = \frac{1}{18} \quad \text{だから、} \quad 0.5 \div \quad = \frac{1}{18}$$

$$= 0.5 \div \frac{1}{18} = \frac{1}{2} \div \frac{1}{18} = \frac{1 \times \cancel{18}^9}{2 \times 1} = 9$$

中学入試用計算問題集(第86回) 解答と解き方

【解答】

① 80

② 1

③ $\frac{1}{18}$

【解き方】

① ひき算よりもかけ算が先。

$$100 - \left\{ 100 - (100 - \quad) \times \frac{1}{2} \right\} \times \frac{1}{3} = 70$$

$$100 - 70 = 30 \quad 30 \div \frac{1}{3} = \frac{30 \times 3}{1} = 90$$

$$100 - (100 - \quad) \times \frac{1}{2} = 90 \quad \text{だから, } 100 - \left[(100 - \quad) \times \frac{1}{2} \right] = 90$$

$$100 - 90 = 10 \quad 10 \div \frac{1}{2} = \frac{10 \times 2}{1} = 20$$

$$100 - \quad = 20 \quad \text{だから, } \quad = 100 - 20 = 80$$

② $2\frac{1}{3} \div 1\frac{1}{3} = \frac{7}{3} \div \frac{4}{3} = \frac{7 \times 3^1}{3 \times 4} = \frac{7}{4}$

$$5\frac{5}{6} \times \frac{4}{21} = \frac{35}{6} \times \frac{4}{21} = \frac{\overset{5}{\cancel{35}} \times \overset{2}{\cancel{4}}}{\underset{3}{\cancel{6}} \times \underset{3}{\cancel{21}}} = \frac{10}{9}$$

$$\frac{13}{36} + \frac{7}{4} - \frac{10}{9} = \frac{13}{36} + \frac{63}{36} - \frac{40}{36} = \frac{36}{36} = 1$$

③ $0.5 - 0.125 = \frac{1}{2} - \frac{1}{8} = \frac{4}{8} - \frac{1}{8} = \frac{3}{8}$

$$\frac{3}{8} \times 2\frac{2}{3} = \frac{3}{8} \times \frac{8}{3} = \frac{\overset{1}{\cancel{3}} \times \overset{1}{\cancel{8}}}{\underset{1}{\cancel{8}} \times \underset{1}{\cancel{3}}} = 1$$

この問題は, $1 \div \left(\frac{1}{3} + \quad \right) = 2\frac{4}{7}$ となる。

$$1 \div 2\frac{4}{7} = 1 \div \frac{18}{7} = \frac{1 \times 7}{18} = \frac{7}{18}$$

$$= \frac{7}{18} - \frac{1}{3} = \frac{7}{18} - \frac{6}{18} = \frac{1}{18}$$

中学入試用計算問題集(第87回) 解答と解き方

【解答】

① $\frac{39}{40}$ (0.975) ② $\frac{303}{500}$ (0.606) ③ 165

【解き方】

① $2 - \left(-\frac{4}{5} \right) \div 0.125 = \frac{3}{5}$

$$2 - \frac{3}{5} = \frac{10}{5} - \frac{3}{5} = \frac{7}{5}$$

$0.125 = \frac{1}{8}$ だから, $\left(-\frac{4}{5} \right) \div \frac{1}{8} = \frac{7}{5}$ となる。

$$\frac{7}{5} \times \frac{1}{8} = \frac{7 \times 1}{5 \times 8} = \frac{7}{40}$$

$$-\frac{4}{5} = \frac{7}{40} \text{ だから, } = \frac{7}{40} + \frac{4}{5} = \frac{7}{40} + \frac{32}{40} = \frac{39}{40}$$

② $\underbrace{\left(1 - \frac{9}{25} \right) \div 0.8 \times 1.25}_{\text{ア}} - \underbrace{\left(\frac{2}{15} - 0.002 \right) \times 3}_{\text{イ}} = (\quad)$

アの計算

$$1 - \frac{9}{25} = \frac{25}{25} - \frac{9}{25} = \frac{16}{25} \qquad 0.8 = \frac{8}{10} = \frac{4}{5}, \quad 1.25 = 1\frac{1}{4} \text{ だから,}$$

$$\frac{16}{25} \div \frac{4}{5} \times 1\frac{1}{4} = \frac{16}{25} \div \frac{4}{5} \times \frac{5}{4} = \frac{16 \times 5 \times 5}{25 \times 4 \times 4} = 1$$

イの計算

$$\frac{2}{15} - 0.002 = \frac{2}{15} - \frac{2}{1000} = \frac{2}{15} - \frac{1}{500} = \frac{200}{1500} - \frac{3}{1500} = \frac{197}{1500}$$

$$\frac{197}{1500} \times 3 = \frac{197 \times 3}{500} = \frac{197}{500}$$

よって, $1 - \frac{197}{500} = \frac{500}{500} - \frac{197}{500} = \frac{303}{500}$

③ $3.9 \times 6 \times 16.5 \div (1.5 \times 1.3 \times 1.2) = \frac{3.9 \times 6 \times 16.5}{1.5 \times 1.3 \times 1.2}$

$$= \frac{39 \times 60 \times 165}{15 \times 13 \times 12} = 165$$

中学入試用計算問題集(第88回) 解答と解き方

【解答】

① $1\frac{41}{72}$

② $0.4\left(\frac{2}{5}\right)$

③ 3

【解き方】

$$\text{① } 0.85 \div 1.7 = \frac{85}{100} \div 1\frac{7}{10} = \frac{17}{20} \div \frac{17}{10} = \frac{17 \times 10}{20 \times 17} = \frac{1}{2}$$

$$1\frac{7}{20} - \frac{1}{2} = 1\frac{7}{20} - \frac{10}{20} = \frac{27}{20} - \frac{10}{20} = \frac{17}{20}$$

$$\frac{17}{20} \div \frac{72}{100} = \frac{17}{20} \div \frac{18}{25} = \frac{17 \times 25}{20 \times 18} = \frac{85}{72} = 1\frac{13}{72}$$

$2.75 = 2\frac{3}{4}$ だから,

$$2\frac{3}{4} - 1\frac{13}{72} = 2\frac{54}{72} - 1\frac{13}{72} = 1\frac{41}{72}$$

② $1.4 \times \boxed{(2.3 - \quad \times 2)} = 2.1$

$$2.1 \div 1.4 = 1.5$$

$2.3 - \boxed{\quad \times 2} = 1.5$ だから,

$$2.3 - 1.5 = 0.8$$

$$= 0.8 \div 2 = 0.4$$

③ $3\frac{1}{2} \div \frac{3}{4} \div 7 = \frac{7}{2} \div \frac{3}{4} \div 7 = \frac{7 \times 4}{2 \times 3 \times 7} = \frac{2}{3}$

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

中学入試用計算問題集(第89回) 解答と解き方

【解答】

① 301

② 7.89

③ 1000

【解き方】

$$\begin{aligned}
 \text{① } & 308 - [168 \div \{36 - (70 \div 5 - 2)\}] \\
 & = 308 - [168 \div \{36 - (14 - 2)\}] \\
 & = 308 - \{168 \div (36 - 12)\} \\
 & = 308 - (168 \div 24) \\
 & = 308 - 7 \\
 & = 301
 \end{aligned}$$

$$\begin{aligned}
 \text{② } & 3.1 \times 0.7 + (5.21 - 1.778) \div 0.6 \\
 & = 2.17 + 3.432 \div 0.6 \\
 & = 2.17 + 5.72 \\
 & = 7.89
 \end{aligned}$$

$$\begin{aligned}
 \text{③ } & 0.1 \div 0.01 \times 0.001 \div 0.0001 \times 0.00001 \div 0.000001 \\
 & = \frac{1}{10} \div \frac{1}{100} \times \frac{1}{1000} \div \frac{1}{10000} \times \frac{1}{100000} \div \frac{1}{1000000} \\
 & = \frac{1 \times \cancel{100}^{10} \times 1 \times \cancel{10000}^{10} \times 1 \times \cancel{1000000}^{10}}{\cancel{10} \times \cancel{1} \times \cancel{1000} \times \cancel{1} \times \cancel{100000} \times \cancel{1}} \\
 & = 1000
 \end{aligned}$$

中学入試用計算問題集(第90回) 解答と解き方

【解答】

① 0

② 1.11

③ 6.3

【解き方】

$$\text{①} \quad \boxed{\left(3\frac{1}{4} - 3\right)} + \boxed{\left(4\frac{2}{3} \times 0.3 - \frac{4}{7} \div \frac{5}{6}\right) \times} = \frac{1}{4}$$

$$3\frac{1}{4} - 3 = \frac{1}{4} \qquad \frac{1}{4} - \frac{1}{4} = 0$$

よって、 $\left(4\frac{2}{3} \times 0.3 - \frac{4}{7} \div \frac{5}{6}\right) \times = 0$ となる。よって、 $= 0$

② まともに計算するよりも...

$$\begin{aligned} & 2.34 \div 9 + 3.42 \div 9 + 4.23 \div 9 \\ &= (2.34 + 3.42 + 4.23) \div 9 \\ &= 9.99 \div 9 \\ &= 1.11 \end{aligned}$$

$$\begin{aligned} \text{③} \quad & 25.2 - \{17.2 - (13.9 + 5.6) \div 1.5\} \times 4.5 \\ &= 25.2 - (17.2 - 19.5 \div 1.5) \times 4.5 \\ &= 25.2 - (17.2 - 13) \times 4.5 \\ &= 25.2 - 4.2 \times 4.5 \\ &= 25.2 - 18.9 \\ &= 6.3 \end{aligned}$$