

中学入試用計算問題集(第7回)

試験時間 7分

()月()日()曜日

① $4.53 \text{ m}^2 \div 25 \text{ cm}^2 = (\quad)$

② $\frac{6}{7} \times 4\frac{2}{3} - \frac{1}{12} \div \frac{5}{6} + 5\frac{1}{2} \div 1\frac{2}{11} \div 9\frac{4}{13} = (\quad)$

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

中学入試用計算問題集(第8回)

試験時間 7分

()月()日()曜日

① $3\frac{1}{6} - \frac{1}{3} \times \frac{1}{3} \div \frac{4}{27} - \frac{8}{11} \times 2\frac{3}{4} = (\quad)$

② $3\frac{1}{4} \times 4.4 \div 2\frac{1}{6} - \quad = 1.6 \quad = (\quad)$

③ $(2\frac{2}{3} - \frac{3}{5}) \times 0.15 + 0.3 \times 3\frac{1}{3} = (\quad)$

中学入試用計算問題集(第9回)

試験時間 7分

()月()日()曜日

① $(1\frac{1}{5} - \frac{3}{4}) \div 5\frac{2}{5} - 2\frac{2}{5} \times \frac{5}{144} = (\quad)$

② $\frac{3}{5} \times 4 \div \frac{2}{3} - 0.3 \times \frac{10}{3} = (\quad)$

③ $17 \times 35 \div (7 \div 5\frac{1}{3} \div 1\frac{1}{4} \times 8\frac{1}{3}) = (\quad)$

中学入試用計算問題集(第10回)

試験時間 7分

()月()日()曜日

① $(\frac{2}{3} + 0.8 - \frac{5}{7} - \frac{3}{5}) \times 3.5 = (\quad)$

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

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

中学入試用計算問題集(第11回)

試験時間 7分

()月()日()曜日

① $0.5 \div 1.25 + 2.4 \times 0.25 + 0.75 \div 0.0625 = (\quad)$

② $34.5 \div 6.78 = (\quad)$ (四捨五入して小数第2位まで)

③ 4日6時間42分12秒 - 2日12時間53分47秒
= ()日()時()分()秒

中学入試用計算問題集(第12回)

試験時間 7分

()月()日()曜日

① $0.035 \text{ m}^3 \times 43 - 1125 \text{ l} + 580 \text{ dl} = (\quad) \text{ dl}$

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

③ $2.25 \times (4\frac{1}{3} - 1\frac{2}{9}) \div \frac{7}{12} = (\quad)$

中学入試用計算問題集(第7回) 解答と解き方

【解答】

① 1 8 1 2

② $4\frac{2}{5}$

③ $\frac{17}{30}$

【解き方】

① $1\text{ m}^2 = 10000\text{ cm}^2$ だから, $4.53\text{ m}^2 = 45300\text{ cm}^2$
 $45300\text{ cm}^2 \div 25\text{ cm}^2 = 1812$

② $\frac{6}{7} \times 4\frac{2}{3} = \frac{6}{7} \times \frac{14}{3} = \frac{\overset{2}{\cancel{6}} \times \overset{2}{\cancel{14}}}{\underset{1}{\cancel{7}} \times \underset{1}{\cancel{3}}} = 4$
 $\frac{1}{12} \div \frac{5}{6} = \frac{1 \times \overset{1}{\cancel{6}}}{\underset{2}{\cancel{12}} \times 5} = \frac{1}{10}$

$5\frac{1}{2} \div 1\frac{2}{11} \div 9\frac{4}{13} = \frac{11}{2} \div \frac{13}{11} \div \frac{121}{13} = \frac{\overset{1}{\cancel{11}} \times \overset{1}{\cancel{11}} \times \overset{1}{\cancel{13}}}{2 \times \underset{1}{\cancel{13}} \times \underset{1}{\cancel{121}}} = \frac{1}{2}$

$4 - \frac{1}{10} + \frac{1}{2} = 3\frac{9}{10} + \frac{1}{2} = 3\frac{9}{10} + \frac{5}{10} = 3\frac{14}{10} = 4\frac{4}{10} = 4\frac{2}{5}$

③ $\frac{1}{2 \times 2 - 1} + \frac{1}{3 \times 3 - 1} + \frac{1}{4 \times 4 - 1} + \frac{1}{5 \times 5 - 1}$
 $= \frac{1}{3} + \frac{1}{8} + \frac{1}{15} + \frac{1}{24}$
 $= \frac{40}{120} + \frac{15}{120} + \frac{8}{120} + \frac{5}{120}$
 $= \frac{68}{120}$
 $= \frac{17}{30}$

中学入試用計算問題集(第8回) 解答と解き方

【解答】

① $\frac{5}{12}$

② 5

③ $1\frac{31}{100}$

【解き方】

① $\frac{1}{3} \times \frac{1}{3} \div \frac{4}{27} = \frac{1 \times 1 \times \cancel{27}^3}{\cancel{3} \times \cancel{3} \times 4} = \frac{3}{4}$

$\frac{8}{11} \times 2\frac{3}{4} = \frac{8}{11} \times \frac{11}{4} = \frac{\cancel{8}^2 \times \cancel{11}^1}{\cancel{11} \times 4} = 2$

$3\frac{1}{6} - \frac{3}{4} - 2 = 3\frac{2}{12} - \frac{9}{12} - 2 = 2\frac{14}{12} - \frac{9}{12} - 2 = 2\frac{5}{12} - 2 = \frac{5}{12}$

② $3\frac{1}{4} \times 4.4 \div 2\frac{1}{6} = \frac{13}{4} \times \frac{44}{10} \div \frac{13}{6} = \frac{\cancel{13}^1 \times \cancel{44}^{11} \times \cancel{6}^3}{4 \times \cancel{10} \times \cancel{13}^1} = \frac{33}{5} = 6.6$

よって、 $6.6 - 5 = 1.6$ となる。 $6.6 - 1.6 = 5$

③ $(2\frac{2}{3} - \frac{3}{5}) \times 0.15 + 0.3 \times 3\frac{1}{3}$

ア... $2\frac{2}{3} - \frac{3}{5} = 2\frac{10}{15} - \frac{9}{15} = 2\frac{1}{15}$

イ... $2\frac{1}{15} \times 0.15 = 2\frac{1}{15} \times \frac{15}{100} = \frac{31 \times \cancel{15}^1}{\cancel{15} \times 100} = \frac{31}{100}$

ウ... $0.3 \times 3\frac{1}{3} = \frac{3}{10} \times \frac{10}{3} = \frac{\cancel{3} \times \cancel{10}^1}{\cancel{10} \times \cancel{3}^1} = 1$

$\frac{31}{100} + 1 = 1\frac{31}{100}$

中学入試用計算問題集(第9回) 解答と解き方

【解答】

① 0 ② $2\frac{3}{5}$ ③ 68

【解き方】

① $(1\frac{1}{5} - \frac{3}{4}) \div 5\frac{2}{5} - 2\frac{2}{5} \times \frac{5}{144}$

ア... $1\frac{1}{5} - \frac{3}{4} = 1\frac{4}{20} - \frac{15}{20} = \frac{24}{20} - \frac{15}{20} = \frac{9}{20}$

イ... $\frac{9}{20} \div 5\frac{2}{5} = \frac{9}{20} \div \frac{27}{5} = \frac{9}{20} \times \frac{5}{27} = \frac{1}{12}$

ウ... $2\frac{2}{5} \times \frac{5}{144} = \frac{12}{5} \times \frac{5}{144} = \frac{12}{144} = \frac{1}{12}$

$\frac{1}{12} - \frac{1}{12} = 0$

② $\frac{3}{5} \times 4 \div \frac{2}{3} = \frac{3 \times 4 \times 3}{5 \times 2} = \frac{18}{5}$

$0.3 \times \frac{10}{3} = \frac{3}{10} \times \frac{10}{3} = 1$

$\frac{18}{5} - 1 = \frac{18}{5} - \frac{5}{5} = \frac{13}{5} = 2\frac{3}{5}$

③ カッコの前が÷だったら、カッコの中の×は÷に、÷は×になる。

$17 \times 35 \div (7 \div 5\frac{1}{3} \div 1\frac{1}{4} \times 8\frac{1}{3})$

$= 17 \times 35 \div 7 \times 5\frac{1}{3} \times 1\frac{1}{4} \div 8\frac{1}{3}$

$= 17 \times 35 \div 7 \times \frac{16}{3} \times \frac{5}{4} \div \frac{25}{3}$

$= \frac{17 \times 35 \times 16 \times 5}{7 \times 3 \times 4 \times 25}$

$= 17 \times 4$

$= 68$

中学入試用計算問題集(第10回) 解答と解き方

【解答】

① $\frac{8}{15}$ ② 16 ③ $\frac{4}{5}$

【解き方】

① $\frac{2}{3} + 0.8 - \frac{5}{7} - \frac{3}{5} = \frac{2}{3} + \frac{4}{5} - \frac{5}{7} - \frac{3}{5} = \frac{70}{105} + \frac{84}{105} - \frac{75}{105} - \frac{63}{105} = \frac{16}{105}$

$$\frac{16}{105} \times 3.5 = \frac{16}{105} \times 3 \frac{1}{2} = \frac{16}{105} \times \frac{7}{2} = \frac{\overset{8}{\cancel{16}} \times \overset{1}{\cancel{7}}}{\underset{15}{\cancel{105}} \times \underset{1}{\cancel{2}}} = \frac{8}{15}$$

② $\frac{1}{3} - \frac{1}{4} = \frac{4}{12} - \frac{3}{12} = \frac{1}{12}$

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

$$2\frac{1}{3} \div \frac{1}{12} \times \frac{5}{7} \div 1\frac{1}{4} = \frac{7}{3} \div \frac{1}{12} \times \frac{5}{7} \div \frac{5}{4} = \frac{\overset{1}{7} \times \overset{4}{\cancel{12}} \times \overset{1}{5} \times \overset{1}{4}}{\underset{1}{3} \times \underset{1}{1} \times \underset{1}{7} \times \underset{1}{5}} = 16$$

③ $\boxed{2\frac{1}{3} \div \quad \div 1\frac{2}{3}} \times \frac{3}{7} = \frac{3}{4} \quad \frac{3}{4} \div \frac{3}{7} = \frac{\overset{1}{3} \times \overset{7}{\cancel{7}}}{\underset{1}{4} \times \underset{3}{\cancel{3}}} = \frac{7}{4}$

$\boxed{2\frac{1}{3} \div \quad} \div 1\frac{2}{3} = \frac{7}{4}$ となるから, $\frac{7}{4} \times 1\frac{2}{3} = \frac{7}{4} \times \frac{5}{3} = \frac{7 \times 5}{4 \times 3} = \frac{35}{12}$

$$2\frac{1}{3} \div \quad = \frac{35}{12} \quad \text{だから,} \quad = 2\frac{1}{3} \div \frac{35}{12} = \frac{7}{3} \div \frac{35}{12} = \frac{\overset{1}{7} \times \overset{4}{\cancel{12}}}{\underset{1}{3} \times \underset{5}{\cancel{35}}} = \frac{4}{5}$$

中学入試用計算問題集(第12回) 解答と解き方

【解答】

① 4380 ② $2\frac{4}{7}$ ③ 12

【解き方】

① $1\text{ m}^3 = 1000\text{ l}$, $1\text{ l} = 10\text{ dl}$ であるから ,
 $0.035\text{ m}^3 = 35\text{ l} = 350\text{ dl}$, $1125\text{ l} = 11250\text{ dl}$
 $350\text{ dl} \times 43 - 11250\text{ dl} + 580\text{ dl}$
 $= 15050\text{ dl} - 11250\text{ dl} + 580\text{ dl}$
 $= 4380\text{ dl}$

② $2\frac{1}{6} - 1\frac{2}{3} = 2\frac{1}{6} - 1\frac{4}{6} = 1\frac{7}{6} - 1\frac{4}{6} = \frac{3}{6} = \frac{1}{2}$
 $\frac{1}{2} \times 3\frac{3}{4} = \frac{1}{2} \times \frac{15}{4} = \frac{1 \times 15}{2 \times 4} = \frac{15}{8}$
 $\frac{15}{8} \div \left(-1\frac{1}{2} \right) = 1\frac{3}{4}$
 $\frac{15}{8} \div 1\frac{3}{4} = \frac{15}{8} \div \frac{7}{4} = \frac{15 \times 4}{8 \times 7} = \frac{15}{14} = 1\frac{1}{14}$
 $-1\frac{1}{2} = \frac{15}{14} \qquad = 1\frac{1}{14} + 1\frac{1}{2} = 1\frac{1}{14} + 1\frac{7}{14} = 2\frac{8}{14} = 2\frac{4}{7}$

③ $2.25 = 2\frac{1}{4}$, $4\frac{1}{3} - 1\frac{2}{9} = 4\frac{3}{9} - 1\frac{2}{9} = 3\frac{1}{9}$ だから ,
 $2\frac{1}{4} \times 3\frac{1}{9} \div \frac{7}{12} = \frac{9}{4} \times \frac{28}{9} \div \frac{7}{12} = \frac{9 \times 28 \times 12}{4 \times 9 \times 7} = 12$