

2008 慶應義塾普通部

1. $5\frac{1}{4} - 11 \div (3.125 - \square) = \frac{9}{20}$

2008 京華中学校

1. (1) $4 \times 9 - 16 \div (8 - 4) = \square$
(2) $1.2 \times 34.5 + 7.98 \div 0.6 = \square$
(3) $5.5 \times \left(1\frac{1}{2} - 1\frac{1}{3}\right) - \frac{1}{4} = \square$
(4) $\left(\square \times 2.5 + 5\right) \div 3 - 3\frac{1}{2} = 4$

2008 攻玉社中学校

1. (1) $3 \times (13 + 4 \times 4) + (48 - 32 \div 8) \times 2 = \square$
(2) $1 \div \left\{6\frac{2}{3} - \left(5\frac{3}{4} - \square\right) \times \frac{8}{3}\right\} = \frac{9}{10}$

2008 駒場東邦中学校

1. (1) $\left(8\frac{1}{3} - 1\frac{1}{5} \times 3.125\right) \div 1\frac{7}{8} + 3.9 \div 1\frac{4}{5}$

2008 サレジオ学院中学校

1. (1) $1428.57 \times 5 - 2857.14 \times \square = 1428.57$
(2) $\left(17\frac{1}{3} + 8.125 \times \frac{4}{5}\right) \div \left\{21.25 - 6\frac{2}{3} \div 5\frac{1}{3}\right\} \times 9\frac{3}{4} = \square$
(3) $\left\{(2008 - \square) \div 3\frac{1}{3}\right\} \times \left(\frac{5}{8} - \frac{5}{12} + \frac{1}{20}\right) = 93$

2008 芝中学校

1. (1) $\left(\frac{1}{3} + \frac{4}{9} - 0.75\right) \times 3\frac{3}{5} + \left(70 + 2\frac{1}{2}\right) \div 40 \div \frac{5}{8} = \square$
(2) $\square \times \left(\frac{3}{4} + \frac{7}{20} \div 2\frac{4}{5}\right) + \frac{2}{7} \times \left\{15\frac{1}{6} - 2 \times \left(\frac{1}{6} + \frac{5}{12}\right)\right\} = 11$

2008 芝浦工業大学中学校(第2回)

1. (1) $10013 + 1013 + 113 - 9998 - 998 - 98$ を計算しなさい。
(2) $(1+3) + (2+4) + (3+5) + (4+6) + (5+7) + (6+8) + (7+9) + (8+10) + (9+11)$ を計算しなさい。
(3) $\left(1.4 - \frac{1}{3}\right) \times 0.09 \div \frac{7}{5}$ を計算しなさい。

2008 城西川越中学校

1. (1) $7 \div (15 - 4 \times 2) + 3 \div 6 \times 4 = \square$
(2) $\left(1.25 - \frac{1}{3}\right) \div 1\frac{1}{4} - \frac{12}{5} \div 1.8 \times \frac{1}{4} = \square$
(3) $(1.7 + \square) \times \frac{1}{7} + 0.5 = \frac{11}{14}$

2008 慶元義塾普通部

$$1. 5\frac{1}{4} - 11 \div (3.125 - \square) = \frac{9}{20}$$

\swarrow (3) \searrow (1)
 (2)

$$\textcircled{2} = 5\frac{1}{4} - \frac{9}{20} = 4\frac{25}{20} - \frac{9}{20} = 4\frac{16}{20} = 4\frac{4}{5}$$

$$\textcircled{1} = 11 \div 4\frac{4}{5} = 11 \div \frac{24}{5} = \frac{55}{24} = 2\frac{7}{24}$$

$$\square = 3\frac{1}{8} - 2\frac{7}{24} = 2\frac{27}{24} - 2\frac{7}{24} = \frac{20}{24} = \underline{\underline{\frac{5}{6}}}$$

2008 京華中学

$$1. (1) 4 \times 9 - 16 \div (8 - 4) = 36 - 16 \div 4 = 36 - 4 = \underline{\underline{32}}$$

$$(2) 1.2 \times 34.5 + 7.98 \div 0.6$$

$$= 41.4 + 13.3 = \underline{\underline{54.7}}$$

$$\begin{array}{r} 34.5 \\ \times 1.2 \\ \hline 690 \\ 345 \\ \hline 41.4 \end{array}$$

$$\begin{array}{r} 133 \\ 0.6 \overline{) 7.98} \\ \underline{6} \\ 19 \\ \underline{18} \\ 18 \\ \underline{18} \\ 0 \end{array}$$

$$(3) 5.5 \times (1\frac{1}{2} - 1\frac{1}{3}) - \frac{1}{4}$$

$$= \frac{11}{2} \times \frac{1}{6} - \frac{1}{4} = \frac{11}{12} - \frac{3}{12} = \frac{8}{12} = \underline{\underline{\frac{2}{3}}}$$

$$(4) (\square \times 2.5 + 5) \div 3 - \frac{1}{2} = 4$$

\swarrow (1) \searrow (3)
 (2)

$$\textcircled{3} = 4 + 3\frac{1}{2} = 7\frac{1}{2}$$

$$\textcircled{2} = 7\frac{1}{2} \times 3 = \frac{15}{2} \times 3 = \frac{45}{2} = 22.5$$

$$\textcircled{1} = 22.5 - 5 = 17.5$$

$$\square = 17.5 \div 2.5$$

$$= 7$$

2008 攻玉社 中学

$$\begin{aligned}
 1. (1) & 3 \times (13 + \frac{4 \times 4}{16}) + (48 - 32 \div 8) \times 2 \\
 & = 3 \times 29 + 44 \times 2 \\
 & = 87 + 88 = \underline{\underline{175}}
 \end{aligned}$$

$$(2) \quad 1 \div \left\{ 6\frac{2}{3} - \left(5\frac{3}{4} - \square \right) \times \frac{8}{3} \right\} = \frac{9}{10}$$

$\underbrace{\hspace{1.5cm}}_{\textcircled{3}} \quad \underbrace{\hspace{1.5cm}}_{\textcircled{1}} \quad \underbrace{\hspace{1.5cm}}_{\textcircled{2}}$

$$\textcircled{3} = 1 \div \frac{9}{10} = \frac{10}{9} \quad \textcircled{2} = 6\frac{2}{3} - \frac{10}{9} = 5\frac{15}{9} - \frac{10}{9} = 5\frac{5}{9} = \frac{50}{9}$$

$$\textcircled{1} = \frac{50}{9} \div \frac{8}{3} = \frac{50}{9} \times \frac{3}{8} = \frac{25}{12} = 2\frac{1}{12}$$

$$\square = 5\frac{3}{4} - 2\frac{1}{12} = 5\frac{9}{12} - 2\frac{1}{12} = 3\frac{8}{12} = \underline{\underline{3\frac{2}{3}}}$$

2008 駒場 東邦 中学

$$\begin{aligned}
 1. (1) & \left(8\frac{1}{3} - \frac{1}{5} \times 3.125 \right) \div \frac{7}{8} + 3.9 \div \frac{4}{5} \\
 & = \left(8\frac{1}{3} - \frac{3\frac{1}{8} \times \frac{25}{8}}{1} \right) \times \frac{8}{15} + \frac{39}{10} \times \frac{5}{4}
 \end{aligned}$$

$$= \left(\frac{25}{3} - \frac{15}{4} \right) \times \frac{8}{15} + \frac{13}{6}$$

$$= \left(\frac{100}{12} - \frac{45}{12} \right) \times \frac{8}{15} + \frac{13}{6}$$

$$= \frac{55}{12} \times \frac{8}{15} + \frac{13}{6}$$

$$= \frac{22}{9} + \frac{13}{6}$$

$$= \frac{44}{18} + \frac{39}{18} = \frac{83}{18} = \underline{\underline{4\frac{11}{18}}}$$

$$\begin{array}{r}
 4 \\
 18 \overline{) 83} \\
 \underline{72} \\
 11
 \end{array}$$

2008 サレジオ学院 中学

$$1. \text{ ① } 1428.57 \times 5 - 2857.14 \times \square = 1428.57$$

$$1428.57 \times 5 - 1428.57 \times 2 \times \square = 1428.57$$

$$1428.57 \times (5 - 2 \times \square) = 1428.57 \times 1$$

$$5 - 2 \times \square = 1 \quad 2 \times \square = 5 - 1 = 4 \quad \underline{\underline{\square = 2}}$$

$$\text{② } (17\frac{1}{3} + 8.125 \times \frac{4}{5}) \div (21.25 - 6\frac{2}{3} \div 5\frac{1}{3}) \times 9\frac{3}{4}$$

$$= (17\frac{1}{3} + 8\frac{1}{8} \times \frac{4}{5}) \div (21\frac{1}{4} - \frac{20^5}{8} \times \frac{8}{16}) \times \frac{39}{4}$$

$$= (17\frac{1}{3} + \frac{13}{2} \times \frac{1}{5}) \div (\frac{85}{4} - \frac{5}{4}) \times \frac{39}{4}$$

$$= (\frac{104}{6} + \frac{39}{6}) \times \frac{1}{80} \times \frac{39}{4}$$

$$= \frac{143}{2} \times \frac{1}{80} \times \frac{39}{1} = \frac{1859}{160} = 11\frac{99}{160}$$

$$\begin{array}{r} \times 143 \\ 13 \\ \hline 1859 \end{array}$$

$$\begin{array}{r} 11 \\ 160 \overline{) 1859} \\ \underline{160} \\ 259 \\ \underline{160} \\ 99 \end{array}$$

$$\text{③ } \left\{ (2008 - \square) \div 3\frac{1}{3} \right\} \times \left(\frac{5}{8} - \frac{5}{12} + \frac{1}{20} \right) = 93$$

$$\downarrow$$

$$\frac{15}{120} - \frac{50}{120} + \frac{6}{120} = \frac{31}{120}$$

$$\left\{ \right\} = 93 \div \frac{31}{120} = 93 \times \frac{120}{31} = 360$$

$$(\quad) = 360 \times 3\frac{1}{3} = 360 \times \frac{10}{3} = 1200$$

$$\square = 2008 - 1200$$

$$= \underline{\underline{808}}$$

2008 芝中学

$$\begin{aligned} 1^{(1)} & \left(\frac{1}{3} + \frac{4}{9} - 0.75 \right) \times \frac{3}{5} + \left(10 + 2\frac{1}{2} \right) \div 40 \div \frac{5}{8} \\ & = \left(\frac{1}{9} - \frac{3}{4} \right) \times \frac{18}{5} + \frac{29}{2} \times \frac{1}{40} \times \frac{8}{5} \\ & = \frac{28-27}{2} \times \frac{18}{5} + \frac{29}{10} \\ & = \frac{1}{10} + \frac{29}{10} = \frac{30}{10} = \underline{\underline{3}} \end{aligned}$$

$$\begin{aligned} (2) \quad \square \times \left(\frac{3}{4} + \frac{1}{20} \div 2\frac{4}{5} \right) + \frac{2}{7} \times \left\{ 15\frac{1}{6} - 2 \times \left(\frac{1}{6} + \frac{5}{12} \right) \right\} &= 11 \\ & \quad \left(\frac{\frac{3}{4} \times \frac{5}{14}}{\frac{7}{8}} \right) \quad \left(4 \quad 14 \quad \frac{1}{6} \right) \end{aligned}$$

$$\square \times \frac{7}{8} + 4 = 11$$

$$\square \times \frac{7}{8} = 11 - 4 = 7$$

$$\square = 7 \div \frac{7}{8} = \underline{\underline{8}}$$

2008 芝浦工業大学中学 (第2回)

$$1. (1) \underbrace{10013} + \underbrace{1013} + \underbrace{113} - \underbrace{9998} - \underbrace{998} - \underbrace{98} \\ = \underbrace{15} + \underbrace{15} + \underbrace{15} = \underline{\underline{45}}$$

$$(2) \underbrace{(1+3)} + \underbrace{(2+4)} + \underbrace{(3+5)} + \underbrace{(4+6)} + \underbrace{(5+7)} + \underbrace{(6+8)} + \underbrace{(7+9)} + \underbrace{(8+10)} \\ + \underbrace{(9+11)} \\ = \underbrace{1+2+3+4+5+6+7+8+9} + \underbrace{3+4+5+6+7+8+9+10+11} \\ = (1+9) \times 9 \div 2 + (3+11) \times 9 \div 2 \\ = 45 + 63 = \underline{\underline{108}}$$

$$(3) (1.4 - \frac{1}{3}) \times 0.09 \div \frac{7}{5} \\ = (\frac{12}{5} - \frac{1}{3}) \times \frac{9}{100} \times \frac{5}{7} \\ = (\frac{21}{15} - \frac{5}{15}) \times \frac{9}{100} \times \frac{5}{7} \\ = \frac{\cancel{16}^4}{\cancel{75}_1} \times \frac{\cancel{9}^3}{\cancel{100}_{25}} \times \frac{\cancel{5}^1}{7} \\ = \underline{\underline{\frac{12}{175}}}$$

2008 城西川越 中学

$$1 (1) 7 \div (15 - 4 \times 2) + 3 \div 6 \times 4$$

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

$$= 1 + 2 = \underline{\underline{3}}$$

$$(2) (1.25 - \frac{1}{3}) \div \frac{1}{4} - \frac{12}{5} \div 18 \times \frac{1}{4}$$

$$= (\frac{5}{4} - \frac{1}{3}) \div \frac{1}{4} - \frac{12}{5} \times \frac{1}{18} \times \frac{1}{4}$$

$$= \frac{15-4}{12} \times \frac{4}{1} - \frac{1}{3}$$

$$= \frac{11}{3} \times \frac{1}{1} - \frac{1}{3} = \frac{11}{3} - \frac{1}{3} = \frac{10}{3} = \underline{\underline{\frac{10}{3}}}$$

$$(3) (1.7 + \square) \times \frac{1}{7} + 0.5 = \frac{11}{14}$$

$$\textcircled{2} = \frac{11}{14} - \frac{1}{2} = \frac{11}{14} - \frac{7}{14} = \frac{4}{14} = \frac{2}{7}$$

$$\textcircled{1} = \frac{2}{7} \div \frac{1}{7} = 2$$

$$\square = 2 - 1.7 = \underline{\underline{0.3}}$$