

高校入試数学計算問題 1

(ア) $-4 + 2$

$$\boxed{-2}$$

(イ) $8 - 2 \times (5 - 6)$

$$8 - 2 \times (-1) = 8 + 2 = \boxed{10}$$

(ウ) $\frac{2}{5} - \frac{5}{6}$

$$\frac{12 - 25}{30} = \frac{-13}{30}$$

(エ) $18a^2b^2 \div 2a^2b$

$$\frac{\textcircled{9} 18 \cancel{a} \cancel{a} b \cancel{b}}{\cancel{2} \cancel{a} \cancel{a} b} = \boxed{9b}$$

(オ) $\frac{1}{6}(2x+1) - \frac{1}{3}(x-2) \rightarrow \frac{2}{6}(x-2)$ に $1 = \frac{2}{2}$ を加える

$$\frac{2x+1}{6} + \frac{-2x+4}{6} = \frac{5}{6}$$

(カ) $\frac{14}{\sqrt{2}} - \sqrt{50} \rightarrow \sqrt{25 \cdot 2} = 5\sqrt{2}$

$$\textcircled{7} \frac{14\sqrt{2}}{2} - 5\sqrt{2} = \boxed{2\sqrt{2}}$$

(キ) $(x+4)(x-2) - (x-1)^2$

$$\begin{aligned} & x^2 + 2x - 8 - (x^2 - 2x + 1) \\ &= x^2 + 2x - 8 - x^2 + 2x - 1 \\ &= \boxed{4x - 9} \end{aligned}$$

高校入試数学計算問題 2

(ア) $-17 + 9$

$$= -8$$

(イ) $8 - 3 \times (3 + 5)$

$$8 - 3 \times 8 = 8 - 24 = -16$$

(ウ) $\frac{1}{7} - \frac{3}{4}$

$$\frac{4 - 21}{28} = \frac{-17}{28}$$

(エ) $18a^2b \div 6ab$

$$\frac{18a^2b}{6ab} = 3a$$

(オ) $\frac{1}{6}(5x + 3) - \frac{1}{2}(x + 1) \rightarrow \frac{3}{6}(x + 1)$

$$\frac{5x + 3}{6} + \frac{-3x - 3}{6} = \frac{2x}{6} = \frac{1}{3}x$$

(カ) $\frac{21}{\sqrt{3}} - \sqrt{27}$

$$\frac{21\sqrt{3}}{3} - 3\sqrt{3} = 4\sqrt{3}$$

(キ) $(x + 2)(x - 3) - (x - 6)$

$$x^2 - x - 6 - x + 6 = x^2 - 2x$$

高校入試数学計算問題 3

(ア) $(-7) + (-2)$

$$= -9$$

(イ) $4 + 2 \times (6 - 9)$

$$4 + 2 \times (-3) = -2$$

(ウ) $-\frac{2}{7} - \frac{1}{5}$

$$\frac{-10-7}{35} = \frac{-17}{35}$$

(エ) $45a^3b^3 \div 9a^2b$

$$\frac{45 \cancel{a} \cancel{a} \cancel{a} \cancel{b} \cancel{b} \cancel{b}}{9 \cancel{a} \cancel{a} \cancel{b}} = 5ab^2$$

(オ) $\frac{1}{2}(x-3) - \frac{1}{8}(4x-1)$

$$\frac{4x-12}{8} + \frac{-4x+1}{8} = \frac{-11}{8}$$

(カ) $\sqrt{45} - \sqrt{5}$

$$\sqrt{9 \cdot 5} - \sqrt{5} = 3\sqrt{5} - \sqrt{5} = 2\sqrt{5}$$

(キ) $(x-1)(x+9) + (x-4)^2$

$$x^2 + 8x - 9 + x^2 - 8x + 16$$

$$= 2x^2 + 7$$

高校入試数学計算問題 4

(ア) $3 - (-4)$

$$= 7$$

(イ) $6 - 3 \times (4 - 6)$

$$6 - 3 \times (-2) = 6 + 6 = 12$$

(ウ) $-\frac{5}{9} + \frac{1}{2}$

$$\frac{-10 + 9}{18} = \frac{-1}{18}$$

(エ) $30ab^2 \div (-6ab)$

$$\frac{30 \cancel{a} b^2}{-6 \cancel{a} b} = -5b$$

(オ) $\frac{1}{6}(4x + 1) - \frac{1}{3}(2x + 9)$

$$\frac{4x + 1}{6} + \frac{-4x - 18}{6} = \frac{-17}{6}$$

(カ) $\sqrt{32} - \frac{6}{\sqrt{2}}$

$$\sqrt{16 \cdot 2} - \frac{6\sqrt{2}}{2} = 4\sqrt{2} - 3\sqrt{2} = \sqrt{2}$$

(キ) $(x + 1)(x - 5) - (x + 2)^2$

$$\begin{aligned} & x^2 - 4x - 5 - (x^2 + 4x + 4) \\ &= x^2 - 4x - 5 - x^2 - 4x - 4 = -8x - 9 \end{aligned}$$

高校入試数学計算問題 5

(ア) $-4-3$

$$\underline{-7}$$

(イ) $8+3 \times (4-7)$

$$8+3 \times (-3) = 8-9 = \underline{-1}$$

(ウ) $-\frac{1}{7} + \frac{2}{5}$

$$\frac{-5+14}{35} = \underline{\frac{9}{35}}$$

(エ) $21a^2b^3 \div 7ab$

$$\textcircled{3} \frac{21a \times bbb}{7a \times b} = \underline{3ab^2}$$

(オ) $\frac{1}{2}(x+1) - \frac{1}{6}(3x-2)$

$$\frac{3x+3}{6} + \frac{-3x+2}{6} = \underline{\frac{5}{6}}$$

(カ) $\frac{35}{\sqrt{7}} + \sqrt{28} = \sqrt{49}$

$$\textcircled{5} \frac{35\sqrt{7}}{\sqrt{7}} + 2\sqrt{7} = \underline{7\sqrt{7}}$$

(キ) $(x-8)^2 - x(x-1)$

$$\underline{x^2 - 16x + 64 - x^2 + x = -15x + 64}$$

高校入試数学計算問題 6

$$(ア) 5 - (-3) = \boxed{8}$$

$$(イ) 7 + 3 \times (6 - 9) \\ 7 + 3 \times (-3) = 7 - 9 = \boxed{-2}$$

$$(ウ) \frac{1}{2} - \frac{5}{9} \\ \frac{9-10}{18} = \boxed{-\frac{1}{18}}$$

$$(エ) 28a^2b^3 \div 7ab^2 \\ \frac{28a^2b^3}{7ab^2} = \boxed{4ab}$$

$$(オ) \frac{1}{8}(4x-5) - \frac{1}{2}(x-3) \\ \frac{4x-5}{8} + \frac{-4x+12}{8} = \boxed{\frac{7}{8}}$$

$$(カ) \frac{6}{\sqrt{3}} + \sqrt{12} \\ 2 \frac{2\sqrt{3}}{1} + 2\sqrt{3} = \boxed{4\sqrt{3}}$$

$$(キ) (x+4)^2 - x(x-5) \\ x^2 + 8x + 16 - x^2 + 5x = \boxed{13x + 16}$$

高校入試数学計算問題 7

(ア) $9 - (-5)$ $\boxed{14}$

(イ) $3 \times (6 - 8) + 7$
 $3 \times (-2) + 7 = -6 + 7 = 1$ $\boxed{1}$

(ウ) $\frac{1}{5} - \frac{2}{7}$ $\frac{7-10}{35} = \frac{-3}{35}$ $\boxed{\frac{-3}{35}}$

(エ) $27a^2b^2 \div 9a$
 $\textcircled{3} \frac{27a^2b^2}{9a} = 3ab^2$ $\boxed{3ab^2}$

(オ) $\frac{1}{3}(2x+1) - \frac{1}{9}(8x+3)$
 $\frac{6x+3}{9} + \frac{-8x-3}{9} = \frac{-2x}{9}$ $\boxed{\frac{-2x}{9}}$

(カ) $\frac{6}{\sqrt{2}} - \sqrt{72} = 6\sqrt{2}$
 $3 \frac{6\sqrt{2}}{2} - 6\sqrt{2} = -3\sqrt{2}$ $\boxed{-3\sqrt{2}}$

(キ) $(x+1)(x-9) + (x+4)^2$
 $x^2 - 8x - 9 + x^2 + 8x + 16$
 $= 2x^2 + 7$ $\boxed{2x^2 + 7}$