

高校入試計算練習 1、2年生の問題 標準

NO.3

名前

／10 点

1 次の計算をなさい。

$$(1) \quad -3^2 + (-1)^3$$

$$(2) \quad \frac{2}{3} + \frac{1}{2} \times \left(-\frac{2}{5}\right)$$

$$(3) \quad 4 \div (-2) + (-3) \times (-4)$$

$$(4) \quad 18 - 9 \times \left(-\frac{1}{3}\right)^2$$

$$(5) \quad \frac{1}{3}(x - 3y) - \frac{1}{2}\left(2y - \frac{4}{3}x\right)$$

$$(6) \quad \frac{2x - y}{3} - \frac{x + y}{4}$$

$$(7) \quad 3a^2b \div \frac{4}{3}ab \times (-2a)^3$$

2 次の方程式を解きなさい

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

$$(2) \quad 3x - 2 = \frac{5x + 6}{4}$$

$$(3) \quad \begin{cases} \frac{1}{5}x - \frac{1}{2}y = 4 \\ x + 2y = -7 \end{cases}$$

解答

I

$$(1) \quad -9 - 1 = -10$$

$$(2) \quad \frac{2}{3} + \left(-\frac{1}{5} \right) = \frac{4}{15} - \frac{3}{15} = \frac{1}{15}$$

$$(3) \quad -2 + 12 = 10$$

$$(4) \quad 18 - 9 \times \frac{1}{9} = 18 - 1 = 17$$

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

$$(6) \quad \frac{4(2x - y)}{12} - \frac{3(x - y)}{12} \\ = \frac{8x - 4y - 3x + 3y}{12} = \frac{5x - y}{12}$$

$$(7) \quad 3a^2b \times \frac{3}{4ab} \times (-8a^3) \\ = -18a^4$$

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(1) 両辺に15をかける

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

$$(2) \quad 3x - 2 = \frac{5x + 6}{4} \quad \text{両辺に4をかける}$$

$$\begin{aligned} 4(3x - 2) &= 5x + 6 \\ 12x - 8 &= 5x + 6 \\ 7x &= 14 \\ x &= 2 \end{aligned}$$

$$(3) \quad \begin{cases} \frac{1}{5}x - \frac{1}{2}y = 4 & \dots ① \\ x + 2y = -7 & \dots ② \end{cases}$$

$$① \times 10 \quad 2x - 5y = 40 \quad \dots ③$$

$$③ - ② \times 2$$

$$\begin{array}{r} 2x - 5y = 40 \\ -) \quad 2x + 4y = -14 \\ \hline -9y = 54 \end{array}$$

$$y = -6$$

$$y = 6 \quad \text{を②に代入して,}$$

$$x - 12 = -7$$

$$x = 5$$

$$(x, y) = (5, -6)$$