

高校入試対策 計算総合

NO.4

名前

／10 点

1 次の計算をなさい。

① $18 \div (-2) + 7$

② $(-3)^2 \div \frac{1}{6}$

③ $-2(3x - y) + 2x$

④ $3ab^2 \times (-4a^2) \div 6b$

⑤ $5\sqrt{2} + \sqrt{8} - \sqrt{18}$

⑥ $3x^2 - 18x + 27$ (因数分解なさい)

2 次の方程式を解きなさい

① $\frac{2}{5}x = \frac{8}{15}$

② $4 - 2x = 8(2 - 5x)$

③
$$\begin{cases} 3x - 4y = 10 \\ 5x + 2y = 8 \end{cases}$$

④ $x^2 - 8x + 7 = 16$

解答

1

① $-9 + 7 = -2$

② $9 \times 6 = 54$

③
$$\begin{aligned} & -6x + 2y + 2x \\ = & -4x + 2y \end{aligned}$$

④
$$-\frac{3ab^2 \times 4a^2}{6b} = -2a^3b$$

⑤
$$\begin{aligned} & 5\sqrt{2} + 2\sqrt{2} - 3\sqrt{2} \\ = & 4\sqrt{2} \end{aligned}$$

⑥
$$\begin{aligned} & 3(x^2 - 6x + 9) \\ = & 3(x - 3)^2 \end{aligned}$$

2

①
$$\begin{aligned} 6x &= 8 \\ x &= \frac{4}{3} \end{aligned}$$

②
$$\begin{aligned} 4 - 2x &= 16 - 40x \\ 38x &= 12 \\ x &= \frac{6}{19} \end{aligned}$$

③
$$\begin{cases} 3x - 4y = 10 & \dots① \\ 5x + 2y = 8 & \dots② \end{cases}$$

① $\times 1$ - ② $\times 2$ で,

$$\begin{array}{r} 3x - 4y = 10 \\ +) 10x + 4y = 16 \\ \hline 13y = 26 \end{array}$$

$y = 2$
 $x = 2$ を①に代入して,

$$\begin{aligned} x + 9 &= -21 \\ 5x &= -30 \\ x &= -6 \end{aligned}$$

$x = -6 \quad y = 2$

④
$$\begin{aligned} & x^2 - 8x - 9 = 0 \\ & (x + 1)(x - 9) \\ & x = -1, 9 \end{aligned}$$