

■ 次の式を計算しなさい。

① $(12ab + 28b^2) \div 4b$

② $3b(6a + 5c)$

■ 次の式を展開しなさい。

③ $(x+7)(x-4)$

④ $(5y-3)(y+3)$

⑤ $(x+5)^2$

⑥ $(x-12)(x+12)$

⑦ $(a-7)(x-2)$

■ 次の式を因数分解しなさい。

⑧ $y^2 - 13y + 36$

⑨ $x^2 - 49y^2$

⑩ $x^2 + 80x + 1600$

⑪ $-8a^2 - 48a - 72$

■ 次の式を展開しなさい。

⑫ $(5s-3)(4s+t+1)$

⑬ $(a-b-7)(a-b+7)$

⑭ $(a-b+c)^2$

■ 次の値を、因数分解や式の展開の考え方をういて求めなさい。

⑮ 56^2

⑯ 56×44

⑰ $54^2 - 14^2$

■ 次の式を計算しなさい。

$$\begin{aligned} \textcircled{1} \quad (12ab+28b^2) \div 4b \\ = 3a+7b \end{aligned}$$

$$\begin{aligned} \textcircled{2} \quad 3b(6a+5c) \\ = 18ab+15bc \end{aligned}$$

■ 次の式を展開しなさい。

$$\begin{aligned} \textcircled{3} \quad (x+7)(x-4) \\ = x^2+3x-28 \end{aligned}$$

$$\begin{aligned} \textcircled{4} \quad (5y-3)(y+3) \\ = 5y^2+12y-9 \end{aligned}$$

$$\begin{aligned} \textcircled{5} \quad (x+5)^2 \\ = x^2+10x+25 \end{aligned}$$

$$\begin{aligned} \textcircled{6} \quad (x-12)(x+12) \\ = x^2-144 \end{aligned}$$

$$\begin{aligned} \textcircled{7} \quad (a-7)(x-2) \\ = ax-2a-7x+14 \end{aligned}$$

■ 次の式を因数分解しなさい。

$$\begin{aligned} \textcircled{8} \quad y^2-13y+36 \\ = (y-9)(y-4) \end{aligned}$$

$$\begin{aligned} \textcircled{9} \quad x^2-49y^2 \\ = (x+7y)(x-7y) \end{aligned}$$

$$\begin{aligned} \textcircled{10} \quad x^2+80x+1600 \\ = (x+40)^2 \end{aligned}$$

$$\begin{aligned} \textcircled{11} \quad -8a^2-48a-72 \\ = -8(a^2+6a+9) \\ = -8(a+3)^2 \end{aligned}$$

■ 次の式を展開しなさい。

$$\begin{aligned} \textcircled{12} \quad (5s-3)(4s+t+1) \\ = 20s^2+5st-7s-3t-3 \end{aligned}$$

$$\begin{aligned} \textcircled{13} \quad (a-b-7)(a-b+7) \\ a-b=Xとおくと \\ (X-7)(X+7) \\ = X^2-49 \\ = (a-b)^2-49 \\ = a^2-2ab+b^2-49 \end{aligned}$$

$$\begin{aligned} \textcircled{14} \quad (a-b+c)^2 \\ a-b=Xとおくと \\ (X+c)^2 \\ = X^2+2cX+c^2 \\ = (a-b)^2+2c(a-b)+c^2 \\ = a^2-2ab+b^2+2ac-2bc+c^2 \end{aligned}$$

■ 次の値を、因数分解や式を展開の考え方をを用いて求めなさい。

$$\begin{aligned} \textcircled{15} \quad 56^2 \\ = (60-4)^2 \\ = 3600-480+16 \\ = 3136 \end{aligned}$$

$$\begin{aligned} \textcircled{16} \quad 56 \times 44 \\ = (50+6) \times (50-6) \\ = 50^2-6^2 \\ = 2500-36 \\ = 2464 \end{aligned}$$

$$\begin{aligned} \textcircled{17} \quad 54^2-14^2 \\ = (54+14) \times (54-14) \\ = 68 \times 40 \\ = 2720 \end{aligned}$$