

1 解答 (1) 2496 (2) 2601 (3) 160 (4) 2000

$$\begin{aligned} (1) \quad 52 \times 48 &= (50+2)(50-2) \\ &= 50^2 - 2^2 \\ &= 2500 - 4 \\ &= 2496 \end{aligned}$$

$$\begin{aligned} (2) \quad 51^2 &= (50+1)^2 \\ &= 50^2 + 2 \times 1 \times 50 + 1^2 \\ &= 2500 + 100 + 1 \\ &= 2601 \end{aligned}$$

$$\begin{aligned} (3) \quad 22^2 - 18^2 &= (22+18)(22-18) \\ &= 40 \times 4 \\ &= 160 \end{aligned}$$

$$\begin{aligned} (4) \quad 105^2 - 95^2 &= (105+95)(105-95) \\ &= 200 \times 10 \\ &= 2000 \end{aligned}$$

2 解答 (1) 200 (2) 14 (3) 4

$$\begin{aligned} (1) \quad x^2 + 2x - 24 &= (x+6)(x-4) \\ \text{よって, 求める式の値は} \\ (14+6)(14-4) &= 20 \times 10 \\ &= 200 \end{aligned}$$

$$\begin{aligned} (2) \quad x^2 - y^2 &= (x+y)(x-y) \\ \text{よって, 求める式の値は} \\ (5.7+4.3)(5.7-4.3) &= 10 \times 1.4 \\ &= 14 \end{aligned}$$

$$\begin{aligned} (3) \quad x^2 - 2xy + y^2 &= (x-y)^2 \\ \text{よって, 求める式の値は} \\ \left(\frac{5}{3} + \frac{1}{3}\right)^2 &= 2^2 \\ &= 4 \end{aligned}$$

3 解答 20

$$\begin{aligned} (x-1)(x+3) - (x-3)(x-5) &= x^2 + 2x - 3 - (x^2 - 8x + 15) \\ &= 10x - 18 \end{aligned}$$

$$\begin{aligned} \text{よって, 求める式の値は} \quad 10 \times 3.8 - 18 &= 38 - 18 \\ &= 20 \end{aligned}$$