



Factorizations Ex 7.6 Q16

**Answer :**

$$\begin{aligned} & (x+2)^2 - 6(x+2) + 9 \\ &= (x+2)^2 - 2 \times (x+2) \times 3 + 3^2 \\ &= [(x+2) - 3]^2 \\ &= (x+2-3)^2 \\ &= (x-1)^2 \\ &= (x-1)(x-1) \end{aligned}$$

Factorizations Ex 7.6 Q17

**Answer :**

$$\begin{aligned} & 25 - p^2 - q^2 - 2pq \\ &= 25 - (p^2 + 2pq + q^2) \\ &= 5^2 - (p^2 + 2 \times p \times q + q^2) \\ &= 5^2 - (p + q)^2 \\ &= [5 - (p + q)][5 + (p + q)] \\ &= (5 - p - q)(5 + p + q) \\ &= -(p + q - 5)(p + q + 5) \end{aligned}$$

Factorizations Ex 7.6 Q18

**Answer :**

$$\begin{aligned} & x^2 + 9y^2 - 6xy - 25a^2 \\ &= (x^2 - 6xy + 9y^2) - 25a^2 \\ &= [x^2 - 2 \times x \times 3y + (3y)^2] - 25a^2 \\ &= (x - 3y)^2 - (5a)^2 \\ &= [(x - 3y) - 5a][(x - 3y) + 5a] \\ &= (x - 3y - 5a)(x - 3y + 5a) \end{aligned}$$

Factorizations Ex 7.6 Q19

**Answer :**

$$\begin{aligned} & 49 - a^2 + 8ab - 16b^2 \\ &= 49 - (a^2 - 8ab + 16b^2) \\ &= 49 - [a^2 - 2 \times a \times 4b + (4b)^2] \\ &= 7^2 - (a - 4b)^2 \\ &= [7 - (a - 4b)][7 + (a - 4b)] \\ &= (7 - a + 4b)(7 + a - 4b) \\ &= -(a - 4b - 7)(a - 4b + 7) \\ &= -(a - 4b + 7)(a - 4b - 7) \end{aligned}$$

Factorizations Ex 7.6 Q20

**Answer :**

$$\begin{aligned} & a^2 - 8ab + 16b^2 - 25c^2 \\ &= (a^2 - 8ab + 16b^2) - 25c^2 \\ &= [a^2 - 2 \times a \times 4b + (4b)^2] - 25c^2 \\ &= (a - 4b)^2 - (5c)^2 \\ &= [(a - 4b) - 5c][(a - 4b) + 5c] \\ &= (a - 4b - 5c)(a - 4b + 5c) \end{aligned}$$

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