



Factorizations Ex 7.6 Q25

**Answer :**

$$\begin{aligned} & 49 - x^2 - y^2 + 2xy \\ &= 49 - (x^2 - 2xy + y^2) \\ &= 49 - (x^2 - 2 \times x \times y + y^2) \\ &= 7^2 - (x - y)^2 \\ &= [7 - (x - y)][7 + (x - y)] \\ &= (7 - x + y)(7 + x - y) \\ &= (x - y + 7)(y - x + 7) \end{aligned}$$

Factorizations Ex 7.6 Q26

**Answer :**

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

Factorizations Ex 7.6 Q27

**Answer :**

$$\begin{aligned} & x^2 - y^2 - 4xz + 4z^2 \\ &= (x^2 - 4xz + 4z^2) - y^2 \\ &= [x^2 - 2 \times x \times 2z + (2z)^2] - y^2 \\ &= (x - 2z)^2 - y^2 \\ &= [(x - 2z) - y][(x - 2z) + y] \\ &= (x - 2z - y)(x - 2z + y) \\ &= (x + y - 2z)(x - y - 2z) \end{aligned}$$

**Answer :**

$$\begin{aligned} & 49 - x^2 - y^2 + 2xy \\ &= 49 - (x^2 - 2xy + y^2) \\ &= 49 - (x^2 - 2 \times x \times y + y^2) \\ &= 7^2 - (x - y)^2 \\ &= [7 - (x - y)][7 + (x - y)] \\ &= (7 - x + y)(7 + x - y) \\ &= (x - y + 7)(y - x + 7) \end{aligned}$$

Factorizations Ex 7.6 Q26

**Answer :**

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

Factorizations Ex 7.6 Q27

**Answer :**

$$\begin{aligned} & x^2 - y^2 - 4xz + 4z^2 \\ &= (x^2 - 4xz + 4z^2) - y^2 \\ &= [x^2 - 2 \times x \times 2z + (2z)^2] - y^2 \\ &= (x - 2z)^2 - y^2 \\ &= [(x - 2z) - y] [(x - 2z) + y] \\ &= (x - 2z - y) (x - 2z + y) \\ &= (x + y - 2z) (x - y - 2z) \end{aligned}$$

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