



Factorizations Ex 7.6 Q1

Answer :

$$\begin{aligned} & 4x^2 + 12xy + 9y^2 \\ &= (2x)^2 + 2 \times 2x \times 3y + (3y)^2 \\ &= (2x + 3y)^2 \\ &= (2x + 3y)(2x + 3y) \end{aligned}$$

Factorizations Ex 7.6 Q2

Answer :

$$\begin{aligned} & 9a^2 - 24ab + 16b^2 \\ &= (3a)^2 - 2 \times 3a \times 4b + (4b)^2 \\ &= (3a - 4b)^2 \\ &= (3a - 4b)(3a - 4b) \end{aligned}$$

Factorizations Ex 7.6 Q3

Answer :

$$\begin{aligned} & p^2q^2 - 6pqr + 9r^2 \\ &= (pq)^2 - 2 \times pq \times 3r + (3r)^2 \\ &= (pq - 3r)^2 \\ &= (pq - 3r)(pq - 3r) \end{aligned}$$

Factorizations Ex 7.6 Q4

Answer :

$$\begin{aligned} & 36a^2 + 36a + 9 \\ &= 9 \left(4a^2 + 4a + 1 \right) \\ &= 9 \left\{ (2a)^2 + 2 \times 2a \times 1 + 1^2 \right\} \\ &= 9 \left(2a + 1 \right)^2 \\ &= 9 \left(2a + 1 \right) \left(2a + 1 \right) \end{aligned}$$

Factorizations Ex 7.6 Q5

Answer :

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

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