



Factorizations Ex 7.5 Q16

Answer :

$$\begin{aligned}x^3 - 144x \\&= x(x^2 - 144) \\&= x(x^2 - 12^2) \\&= x(x - 12)(x + 12)\end{aligned}$$

Factorizations Ex 7.5 Q17

Answer :

$$\begin{aligned}(x - 4y)^2 - 625 \\&= (x - 4y)^2 - 25^2 \\&= [(x - 4y) - 25][(x - 4y) + 25] \\&= (x - 4y - 25)(x - 4y + 25)\end{aligned}$$

Factorizations Ex 7.5 Q18

Answer :

$$\begin{aligned} & 9(a-b)^2 - 100(x-y)^2 \\ &= [3(a-b)]^2 - [10(x-y)]^2 \\ &= [3(a-b) - 10(x-y)][3(a-b) + 10(x-y)] \\ &= (3a - 3b - 10x + 10y)(3a - 3b + 10x - 10y) \end{aligned}$$

Factorizations Ex 7.5 Q19

Answer :

$$\begin{aligned} & (3 + 2a)^2 - 25a^2 \\ &= (3 + 2a)^2 - (5a)^2 \\ &= [(3 + 2a) - 5a][(3 + 2a) + 5a] \\ &= (3 + 2a - 5a)(3 + 2a + 5a) \\ &= (3 - 3a)(3 + 7a) \\ &= 3(1 - a)(3 + 7a) \end{aligned}$$

Factorizations Ex 7.5 Q20

Answer :

$$\begin{aligned} & (x + y)^2 - (a - b)^2 \\ &= [(x + y) - (a - b)][(x + y) + (a - b)] \\ &= (x + y - a + b)(x + y + a - b) \end{aligned}$$

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