

Factorizations Ex 7.5 Q6

## Answer:

$$144a^{2} - 169b^{2}$$

$$= (12a)^{2} - (13b)^{2}$$

$$= (12a - 13b)(12a + 13b)$$

Factorizations Ex 7.5 Q7

## Answer:

$$(2a-b)^{2}-16c^{2}$$

$$= (2a-b)^{2}-(4c)^{2}$$

$$= [(2a-b)-4c][(2a-b)+4c]$$

$$= (2a-b-4c)(2a-b+4c)$$

Factorizations Ex 7.5 Q8

Answer

$$(x+2y)^2 - 4(2x-y)^2 = (x+2y)^2 - [2(2x-y)]^2$$

$$= [(x+2y) - 2(2x-y)][(x+2y) + 2(2x-y)]$$

$$= (x+2y-4x+2y)(x+2y+4x-2y)$$

$$= 5x(4y-3x)$$

Factorizations Ex 7.5 Q9

## Answer:

$$3a^{5} - 48a^{3}$$

$$= 3a^{3}(a^{2} - 16)$$

$$= 3a^{3}(a^{2} - 4^{2})$$

$$= 3a^{3}(a - 4)(a + 4)$$

Factorizations Ex 7.5 Q10

## Answer:

$$a^{4} - 16b^{4} = a^{4} - 2^{4}b^{4} = \left(a^{2}\right)^{2} - \left(2^{2}b^{2}\right)^{2}$$

$$= \left(a^{2} - 2^{2}b^{2}\right)\left(a^{2} + 2^{2}b^{2}\right)$$

$$= \left[a^{2} - \left(2b\right)^{2}\right]\left(a^{2} + 4b^{2}\right)$$

$$= \left(a - 2b\right)\left(a + 2b\right)\left(a^{2} + 4b^{2}\right)$$

\*\*\*\*\*\*\*\*\* FND \*\*\*\*\*\*\*