

# Factorise a quadratic (difference of two squares)

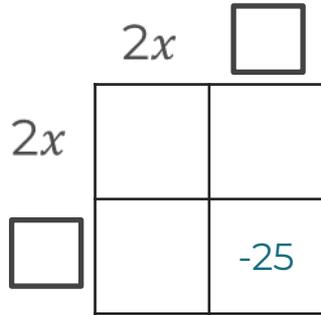
Maths

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# Factorise a quadratic (difference of two squares)

1. Fill in the blanks.



$$4x^2 - 25 = (2x + \boxed{\phantom{00}})(2x - \boxed{\phantom{00}})$$

2. Factorise each expression.

a)  $4x^2 - 9$

d)  $16x^2 - 100$

b)  $4x^2 - 16$

e)  $25x^2 - 225$

c)  $9x^2 - 1$

f)  $36 - 49x^2$

3. True or false? Correct any false statements.

$$16x^2 - 9 \equiv (16x + 3)(16x - 3)$$

$$64x^2 - 81 \equiv (32x + 9)(32x - 9)$$

$$9x^2 + 16 \equiv (3x + 4)(3x - 4)$$

$$4x^2 - 25 \equiv (-5 + 4x)(5 + 4x)$$

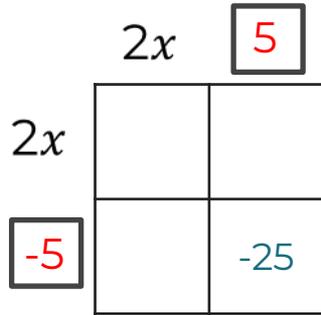


# Answers



# Factorise a quadratic (difference of two squares)

1. Fill in the blanks.



$$2x^2 - 25 = (2x + \boxed{5})(2x - \boxed{5})$$

2. Factorise each expression

a)  $4x^2 - 9$        $(2x + 3)(2x - 3)$

b)  $4x^2 - 16$        $(2x + 4)(2x - 4)$

c)  $9x^2 - 1$        $(3x + 1)(3x - 1)$

d)  $16x^2 - 100$        $(4x + 10)(4x - 10)$

e)  $25x^2 - 225$        $(5x + 15)(5x - 15)$

f)  $36 - 49x^2$        $(6 + 7x)(6 - 7x)$



## Factorise a quadratic (difference of two squares)

3. True or false? Correct any false statements.

$$16x^2 - 9 \equiv (16x + 3)(16x - 3)$$

False.  $(4x + 3)(4x - 3)$

$$64x^2 - 81 \equiv (32x + 9)(32x - 9)$$

False.  $(8x + 9)(8x - 9)$

$$9x^2 + 16 \equiv (3x + 4)(3x - 4)$$

False. Cannot factorise

$$4x^2 - 25 \equiv (-5 + 2x)(5 + 2x)$$

True

