

Factorise a quadratic (difference of two squares)

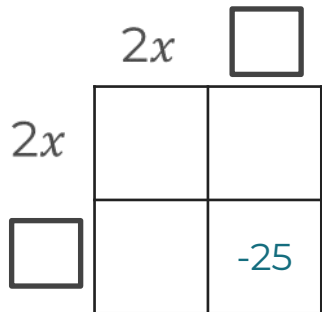
Maths

Mr Clasper



Factorise a quadratic (difference of two squares)

1. Fill in the blanks.



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

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.

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

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

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

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

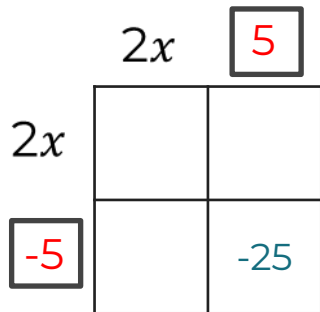


Answers



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

