Factorise a quadratic

Maths

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Factorise a quadratic

1. Fill in the blanks for each multiplication grid

a)

	x	$\square$
x	x^2	$3x$
$\square$	$5x$	15

$x^2 + 8x + 15 = (x + \square)(x + \square)$

b)

	x	$\square$
$\square$	x^2	$3x$
$\square$	$4x$	12

$x^2 + 7x + 12 = (x + \square)(x + \square)$

2. Factorise each expression

a) $x^2 + 5x + 6$

b) $x^2 + 6x + 8$

c) $x^2 + 9x + 8$

d) $x^2 + 3x - 10$

e) $x^2 - 3x - 10$

f) $x^2 - 7x + 12$

3. Which of the following are equivalent to $x^2 - 7x - 18$?

$(x - 2)(x + 9)$

$(x - 2)(x - 9)$

$(x - 9)(x + 2)$

$(x + 2)(x - 9)$

Answers

Factorise a quadratic

1. Fill in the blanks for each multiplication grid

a)

	x	3
x	x^2	$3x$
5	$5x$	15

$x^2 + 8x + 15 = (x + \boxed{3})(x + \boxed{5})$

b)

	x	4
x	x^2	$3x$
3	$4x$	12

$x^2 + 7x + 12 = (x + \boxed{4})(x + \boxed{3})$

Factorise a quadratic

2. Factorise each expression

a) $x^2 + 5x + 6$ $(x + 2)(x + 3)$

b) $x^2 + 6x + 8$ $(x + 4)(x + 2)$

c) $x^2 + 9x + 8$ $(x + 1)(x + 8)$

d) $x^2 + 3x - 10$ $(x + 5)(x - 2)$

e) $x^2 - 3x - 10$ $(x + 2)(x - 5)$

f) $x^2 - 7x + 12$ $(x - 3)(x - 4)$

3. Which of the following are equivalent to $x^2 - 7x - 18$?