Factorising quadratics: harder

1

Use the grid to factorise $2x^2 + 9x + 4$

×	x	+4
$2x$	$2x^2$	$8x$
	x	4

Answer _____

2

Use the grid to factorise $3x^2 + 17x + 10$

×		
$3x$	$3x^2$	$15x$
	$2x$	10

Answer _____

3

Use the grid to factorise $2x^2 + 9x + 7$

×		
	$2x^2$	$2x$
	$7x$	7

Answer _____

4

Factorise $2x^2 + 11x + 15$

$2 \times 15 = 30$

6 and 5

×		
	$2x^2$	$6x$
	$5x$	15

Answer _____

5

Factorise $3x^2 + 13x + 4$

$3 \times 4 =$ ☐

☐ and ☐

×		

Answer _____

6

Factorise $2x^2 + 9x + 9$

☐

☐ and ☐

×		

Answer _____

7 *Notice the change!*

Factorise $2x^2 + x - 6$

☐

☐ and ☐

×		

Answer _____

8

Factorise $3x^2 - 11x + 6$

☐

☐ and ☐

×		

Answer _____

Factorising quadratics: harder *further practice*

9

Factorise $2x^2 + 15x + 7$

Answer _____

10

Factorise $3x^2 + 11x + 10$

Answer _____

11

Factorise $5x^2 + 11x + 2$

Answer _____

12

Factorise $2x^2 - 3x - 9$

Answer _____

13

Factorise $3x^2 - 8x + 4$

Answer _____

14

A rectangle has an area of $3x^2 + 17x + 10$ cm². Its width is $(x + 5)$ cm. Find expressions for its length and its perimeter.

Answer _____

15

Factorise $4x^2 + 8x + 3$

Answer _____

16

Ana factorises $2x^2 + 8x + 6$ as $(2x + 2)(x + 3)$. Is her answer fully factorised? Explain.

Answer _____