Factorising Quadratics — Consolidation

Practice questions

1 Factorise $x^2 + 9x + 18$

2 Factorise $x^2 - 5x - 24$

3 Factorise $x^2 - 144$

4 Factorise fully $5x^2 - 20$

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

6 Factorise $6x^2 - 13x + 6$

7 Solve $3x^2 - 5x - 2 = 0$

8 Simplify fully $\dfrac{2x^2 + 7x + 3}{4x^2 - 1}$

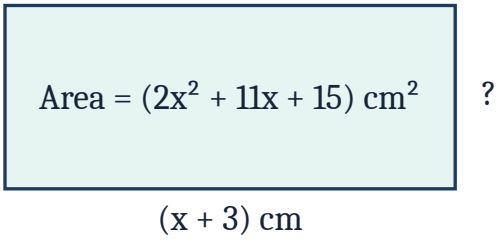
Exam-style questions

1 Simplify fully $\dfrac{x^2 - 9}{x^2 + 5x + 6}$

2 The rectangle has area $(2x^2 + 11x + 15)$ cm² and length $(x + 3)$ cm.

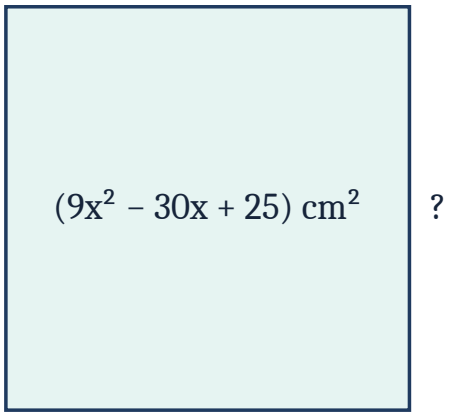
(a) Find an expression for its width.

(b) Find an expression for its perimeter.



3 Work out $73^2 - 27^2$ without a calculator.

4 A square has area $(9x^2 - 30x + 25)$ cm². Find an expression for the length of one side.



5 Show that $(x + 5)^2 - (x - 1)^2$ can be written as $12(x + 2)$.