

Quadratics Revision

Factorise fully:

- 1) $3x^2 - 10x + 3$ 2) $x^2 + 2x - 24$ 3) $9x^2 - 49$
4) $3x^2 - 15x - 18$ 5) $5x^2 - 80$ 6) $2x^2 - 7x - 4$

7) By first factorising calculate without a calculator:

- a) $3.01^2 - 2.99^2$ b) $1998^2 - 2002^2$ c) $1.005^2 - 0.995^2$

8) Solve for x

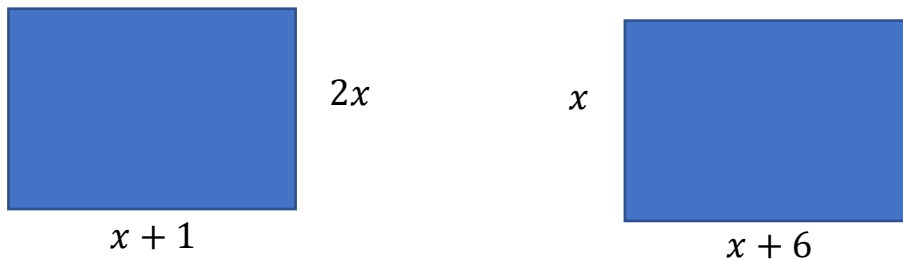
- a) $x^2 + 5x + 4 = 0$ b) $x^2 - 25 = 0$
c) $3x^2 - 11x + 6 = 0$ d) $x^2 = x + 6$
e) $8x - x^2 = 0$ f) $5x^2 - 15x - 50 = 0$

9) The height of a triangle is 4 more than its base.

If the area of the triangle is 48cm^2 , find the base of the triangle.

10) Two consecutive positive odd numbers have a product of 143. Find them.

11) The two rectangles below have the same area, find x



12) By using trial and improvement, find answers to the following to 2dp

- a) $x^3 = 60$ b) $x^2 + 3x = 9$ c) $\frac{10}{x} = 22$

13) A rectangle has a width 7cm longer than its length.

The diagonal of the rectangle is 17cm.

Find the width of the rectangle.

- Ans 1) $(3x - 1)(x - 3)$ 2) $(x + 6)(x - 4)$ 3) $3x + 7)(3x - 7)$ 4) $3(x - 6)(x + 1)$
5) $5(x + 4)(x - 4)$ 6) $(2x + 1)(x - 4)$ 7a) 0.12 b) -16000 c) 0.02 8a) -1, -4 b) 5, -5
c) $3, \frac{2}{3}$ d) 3, -2 e) 8, 0 f) 5, -2 9) 8cm 10) 11 and 13 11) 4 12a) 3.91 b) 1.85 c) 0.45
13) 15cm

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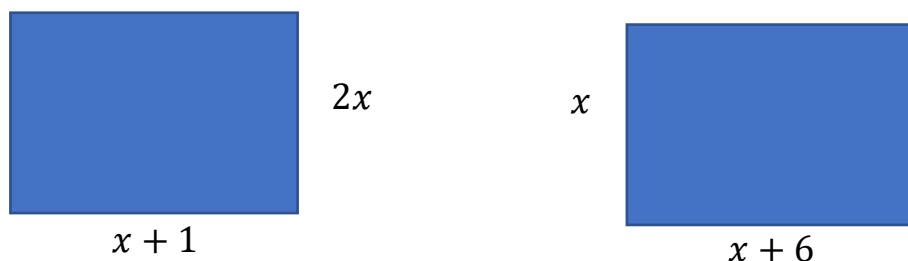
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