Essential Skills 30

The questions in this series of worksheets appear frequently.

These are the GIFTS you must take to succeed

Quadratic Equations (Factorising)   (Non Calculator)

Solve:

1. $x^2 + 8x = 0$

2. $2x^2 - x = 0$

3. $x^2 - 25 = 0$

4. $4x^2 - 1 = 0$

5. $x^2 + 4x + 3 = 0$

6. $3x^2 - x - 4 = 0$

7. $5x^2 + 8x - 4 = 0$

8. $3x^2 - 8x - 3 = 0$

9. $10x^2 - 17x + 3 = 0$
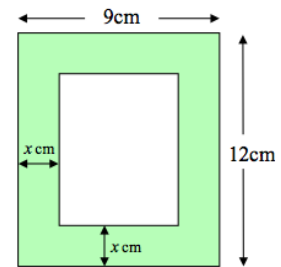
10. $20 + 7x - 6x^2 = 0$

APPLYING QUESTIONS
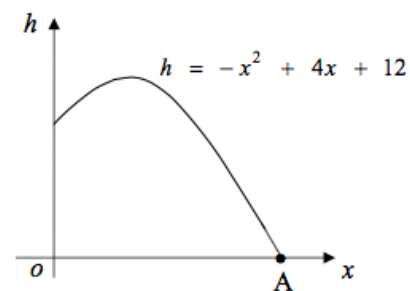
1. Solve $4x(x + 1) = 15$

2. The dimensions of a picture frame are shown:

   (a) Show that the area of glass at the centre is

   $$A = 4x^2 - 42x + 108$$

   (b) If the area of glass is $54cm^2$, find the value of x.

3.

A rock is thrown form a cliff and makes the shape of a parabola.

   (a) How far will it travel before landing in the water?
   (Each unit on the x axis represents 2 metres.)

   (b) What was the maximum height it reached?
   (Each unit on the h axis represents 2 metres.)

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