



1.

[2 marks]

Solve $2x^2 = 72$

.....

2.

[3 marks]

(a) Factorise $x^2 + 4x - 12$

.....

(2)

(b) Hence, or otherwise, solve the equation $x^2 + 4x - 12 = 0$

.....

(1)



3.

[3 marks]

Solve $3x^2 + 8x + 2 = 0$

Give your solutions correct to 3 significant figures.

Show your working clearly.

.....

4.

[4 marks]

(a) Solve $x^2 - 8x + 15 = 0$

.....

(3)

(b) Hence, or otherwise, write down the solutions to $(x + 2)^2 - 8(x + 2) + 15 = 0$

.....

(1)



5.**[3 marks]**

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

Give your solutions correct to 3 significant figures.

Show your working clearly.

.....

6.**[3 marks]**

Mel is using the quadratic formula to solve a quadratic equation.

She substitutes values into the formula and correctly gets

$$\frac{-5 \pm \sqrt{25 - 12}}{6}$$

Work out the quadratic equation that Mel is solving.

Give your answer in the form $ax^2 + bx + c = 0$, where a , b and c are integers.



7.

[3 marks]

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

Give your solutions correct to 3 significant figures.

.....

8.

[3 marks]

(a) Factorise $3x^2 + 7x - 6$

.....

(2)

(b) Hence, or otherwise, solve the equation $3x^2 + 7x - 6 = 0$

.....

(1)



9.

[3 marks]

Solve $x^2 + 5x = 12$

Give your solutions correct to 3 significant figures.

.....

10.

[3 marks]

Solve $(2x - 5)^2 = 49$

.....



11.**[3 marks]**

A ball is thrown vertically upwards from a point P .

The height above P of the ball t seconds after it was thrown is h metres, where $h = 11t - 5t^2$

Work out the values of t when the height of the ball above P is 5 metres.

Show your working clearly.

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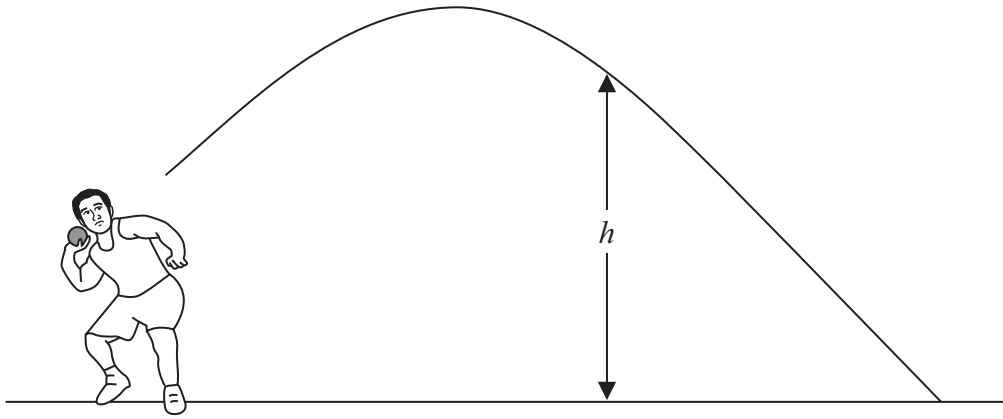
12.**[4 marks]**

Solve $2x^2 - 8 = 3x + 5$

Give your answers correct to 3 significant figures.

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Ivan is a shot putter.

The formula $h = 2 + 6t - 5t^2$ gives the height, h metres, of the shot above the ground t seconds after he has released the shot.

- (i) Solve $2 + 6t - 5t^2 = 0$
 Give your solutions correct to 3 significant figures.
 Show your working clearly.

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The shot hits the ground after T seconds.

- (ii) Write down the value of T .
 Give your answer correct to 3 significant figures.

$T =$



14.

[3 marks]

Solve $3x^2 - x - 1 = 0$

Give your solutions correct to 2 decimal places.

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15.

[4 marks]

Solve $(x - 3)^2 = x + 5$

Give your answers correct to 3 significant figures.

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