

Name: \_\_\_\_\_

## Exam Style Questions

### Solving Quadratics by Factorising



Corbettmaths

Ensure you have: Pencil, pen, ruler, protractor, pair of compasses and eraser

You may use tracing paper if needed

#### Guidance

1. Read each question carefully before you begin answering it.
2. Don't spend too long on one question.
3. Attempt every question.
4. Check your answers seem right.
5. Always show your workings

Revision for this topic

[www.corbettmaths.com/contents](http://www.corbettmaths.com/contents)

Video 266



1. Solve  $x^2 + 5x + 6 = 0$

.....  
**(2)**

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2. Solve  $x^2 + 9x + 14 = 0$

.....  
**(2)**

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3. Solve  $x^2 + 21x + 20 = 0$

.....  
**(2)**

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4. Solve  $x^2 - 3x - 18 = 0$

.....  
**(2)**

5. Solve  $x^2 - 49 = 0$

.....  
**(2)**

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6. Solve  $x^2 - 2x - 8 = 0$

.....  
**(2)**

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7. Solve  $x^2 + 10x - 24 = 0$

.....  
**(2)**

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8. Solve  $x^2 - 13x + 30 = 0$

.....  
**(2)**

9. Solve  $y^2 + 4y - 12 = 0$

.....  
(2)

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10. Solve  $m^2 + 24m + 63 = 0$

.....  
(2)

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11. Solve  $m^2 - 16m + 64 = 0$

.....  
(2)

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12. Solve  $2x^2 + 5x + 2 = 0$

.....  
(2)

13. Solve  $5x^2 + 19x - 4 = 0$

.....  
(2)

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14. Solve  $2x^2 - 11x + 15 = 0$

.....  
(2)

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15. Solve  $y^2 - 6y = 27$

.....  
(2)

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16. Solve  $w^2 + 2w = 8$

.....  
(2)

17. Solve  $x^2 = 8x - 15$

.....  
(2)

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18. Solve  $x^2 + 70 = 17x$

.....  
(2)

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19. Solve  $y^2 + 9y + 2 = 8y + 58$

.....  
(2)

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20. Solve  $5y^2 + 8y - 100 = y^2 + 4y - 37$

.....  
(2)

21. Victor is  $y$  years old.  
His brother Fred is four years old than Victor.

The product of their ages is 780.

(a) Set up an equation to represent this information.

.....  
(2)

(b) Solve your equation from (a) to find Victor's age.

.....  
(2)

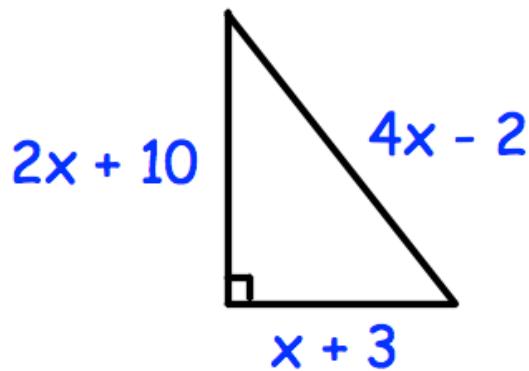
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22. A rectangular field is 30m longer than wide.  
The area of the field is  $8800\text{m}^2$

Work out the perimeter of the field.

.....  
m  
(4)

23.

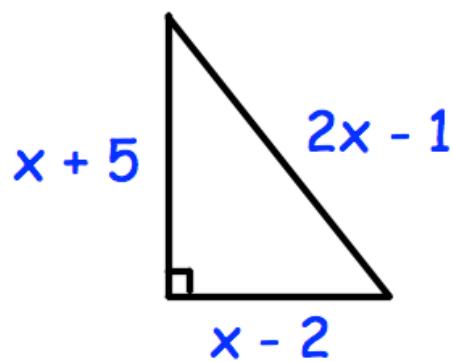


Shown is a right angled triangle.

Show that  $11x^2 - 62x - 105 = 0$

(4)

24.



Shown is a right angled triangle with sides are measured in centimetres.

(a) Show that  $x^2 - 5x - 14 = 0$

(4)

(b) Find x.

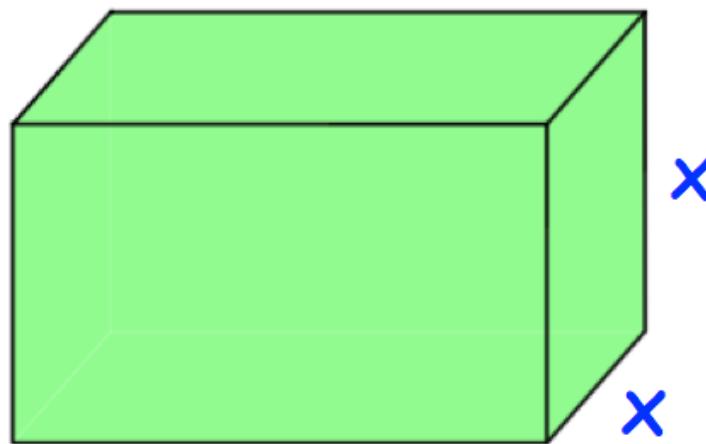
..... cm  
(2)

(c) Find the area of the triangle.

..... cm<sup>2</sup>  
(1)

25.

$$x + 6$$



The surface area of the cuboid is  $270\text{cm}^2$ .

(a) Show  $x^2 + 4x - 45 = 0$

(4)

(b) Find x.

.....cm  
(2)

(c) Find the volume of the cuboid.

.....cm<sup>2</sup>  
(1)

26. Solve

$$\frac{25}{m+3} = m + 3$$

$$m = \dots \text{ or } m = \dots$$

(2)

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27. A wire of length 20cm is cut into **two** pieces, each of which is bent into a square.

(a) If the length of the side of one square is  $x$  cm, show that the length of the side of the other square is  $(5 - x)$  cm.

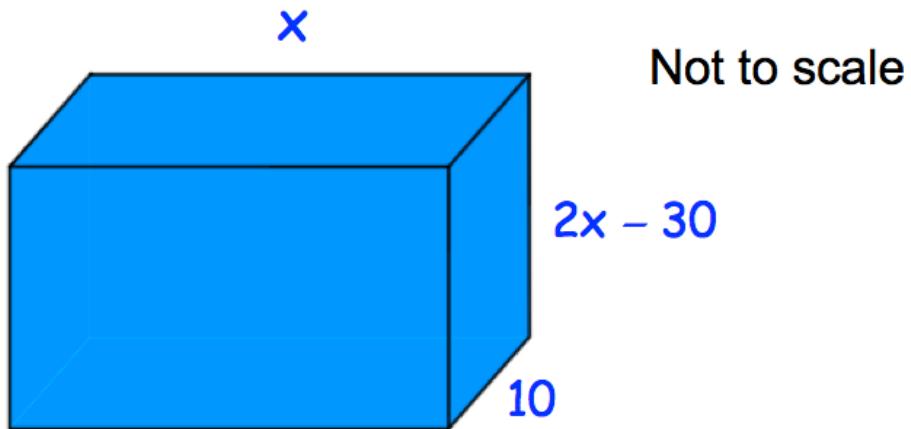
(2)

The **total** area of the two squares is  $14.5\text{cm}^2$ .

(b) Find the lengths of the two pieces of wire.

..... and ..... cm  
(4)

28. The diagram shows a cuboid.  
The volume of the cuboid is  $5000\text{cm}^3$ .



(a) Show  $2x^2 - 30x - 500 = 0$

(3)

(b) Solve  $2x^2 - 30x - 500 = 0$  to find  $x$ , the length of the cuboid.

.....cm  
(3)