

1. (i) Factorise  $x^2 - 4x - 45$

.....

(ii) Solve the equation

$$x^2 - 4x - 45 = 0$$

.....

**(Total 3 marks)**

2. (i) Factorise  $x^2 - 7x + 12$

.....

(ii) Solve the equation

$$x^2 - 7x + 12 = 0$$

.....

**(Total 3 marks)**

3. (a) Factorise  $x^2 - 3x - 18$

.....  
(2)

(b) Solve  $x^2 - 3x - 18 = 0$

$x =$ .....

or  $x =$ .....  
(1)

**(Total 3 marks)**

4. (a) Factorise  $x^2 + 6x + 8$

.....  
(2)

(b) Solve  $x^2 + 6x + 8 = 0$

$x =$ .....

or  $x =$ .....  
(1)

**(Total 3 marks)**

5. (a) Factorise  $x^2 - x - 56$

.....

(2)

(b) Solve  $x^2 - x - 56 = 0$

$x =$ .....

or  $x =$ .....

(1)

**(Total 3 marks)**

6. (i) Factorise  $x^2 + 9x + 20$

.....

(ii) Solve the equation

$$x^2 + 9x + 20 = 0$$

.....

**(Total 3 marks)**

7. (i) Factorise  $x^2 - 12x + 35$

.....

(ii) Solve the equation

$$x^2 - 12x + 35 = 0$$

.....

**(Total 3 marks)**

8. (i) Factorise  $x^2 - x - 72$

.....

(ii) Solve the equation

$$x^2 - x - 72 = 0$$

.....

**(Total 3 marks)**

9. (a) Factorise  $x^2 - 15x + 56$

.....

(2)

(b) Solve  $x^2 - 15x + 56 = 0$

$x =$ .....

or  $x =$ .....

(1)

**(Total 3 marks)**

10. (a) Factorise  $x^2 + 9x + 18$

.....

(2)

(b) Solve  $x^2 + 9x + 18 = 0$

$x =$ .....

or  $x =$ .....

(1)

**(Total 3 marks)**

11. (a) Factorise  $x^2 - 2x - 48$

.....

(2)

(b) Solve  $x^2 - 2x - 48 = 0$

$x =$ .....

or  $x =$ .....

(1)

**(Total 3 marks)**

12. (i) Factorise  $x^2 + 10x + 24$

.....

(ii) Solve the equation

$$x^2 + 10x + 24 = 0$$

.....

**(Total 3 marks)**

13.

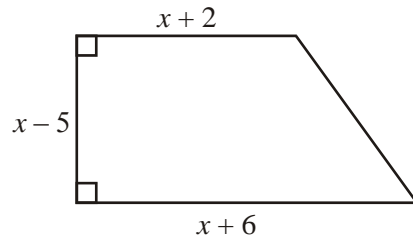


Diagram **NOT** accurately drawn

The diagram shows a trapezium.

The lengths of three of the sides of the trapezium are  $x - 5$ ,  $x + 2$  and  $x + 6$ . All measurements are given in centimetres.

The area of the trapezium is  $36 \text{ cm}^2$ .

(a) Show that  $x^2 - x - 56 = 0$

(4)

(b) (i) Solve the equation  $x^2 - x - 56 = 0$

.....

(ii) Hence find the length of the shortest side of the trapezium.

..... cm

(4)

**(Total 8 marks)**