Chhetri Academy

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GCSE MATHS

Algebra

Edexcel 1MA1 | Subtopic collection Topic 18

Solving quadratic equations

Foundation tier

Past paper question booklet

10	2012-2024	Foundation
question groups	available papers	tier

Before you begin

1. Show working and use units where appropriate.
2. Use extra paper if you need more space.
3. Print at actual size (100%) for measurement questions.

Name _____ **Date** _____

Whole questions are retained for context; some parts cover other points. Legacy sources are labelled.

13 (a) Solve $x - 5 = 7$

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

(b) Solve $\frac{t}{2} = 7$

$t =$ .....
(1)

(c) Solve $y + 2y + 3y = 42$

$y =$ .....
(2)

(d) Solve $5p - 4 = 21$

$p =$ .....
(2)

(Total for Question 13 is 6 marks)

Question 02

24 Solve $x^2 + 5x - 24 = 0$

.....

(Total for Question 24 is 3 marks)

24 (a) Solve $2x^2 = 72$

.....

(2)

(b) Expand and simplify $(2x + 1)(3x - 2)$

.....

(2)

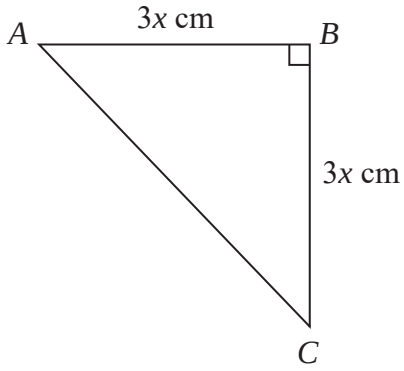
(c) Factorise $x^2 + 6x + 9$

.....

(1)

(Total for Question 24 is 5 marks)

17 *ABC* is an isosceles right-angled triangle.



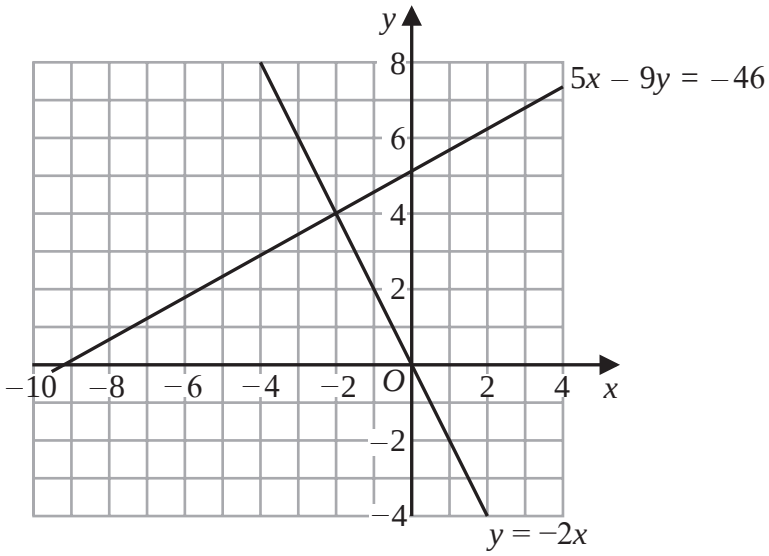
The area of the triangle is 162 cm^2

Work out the value of x.

$x =$ .....

(Total for Question 17 is 3 marks)

28



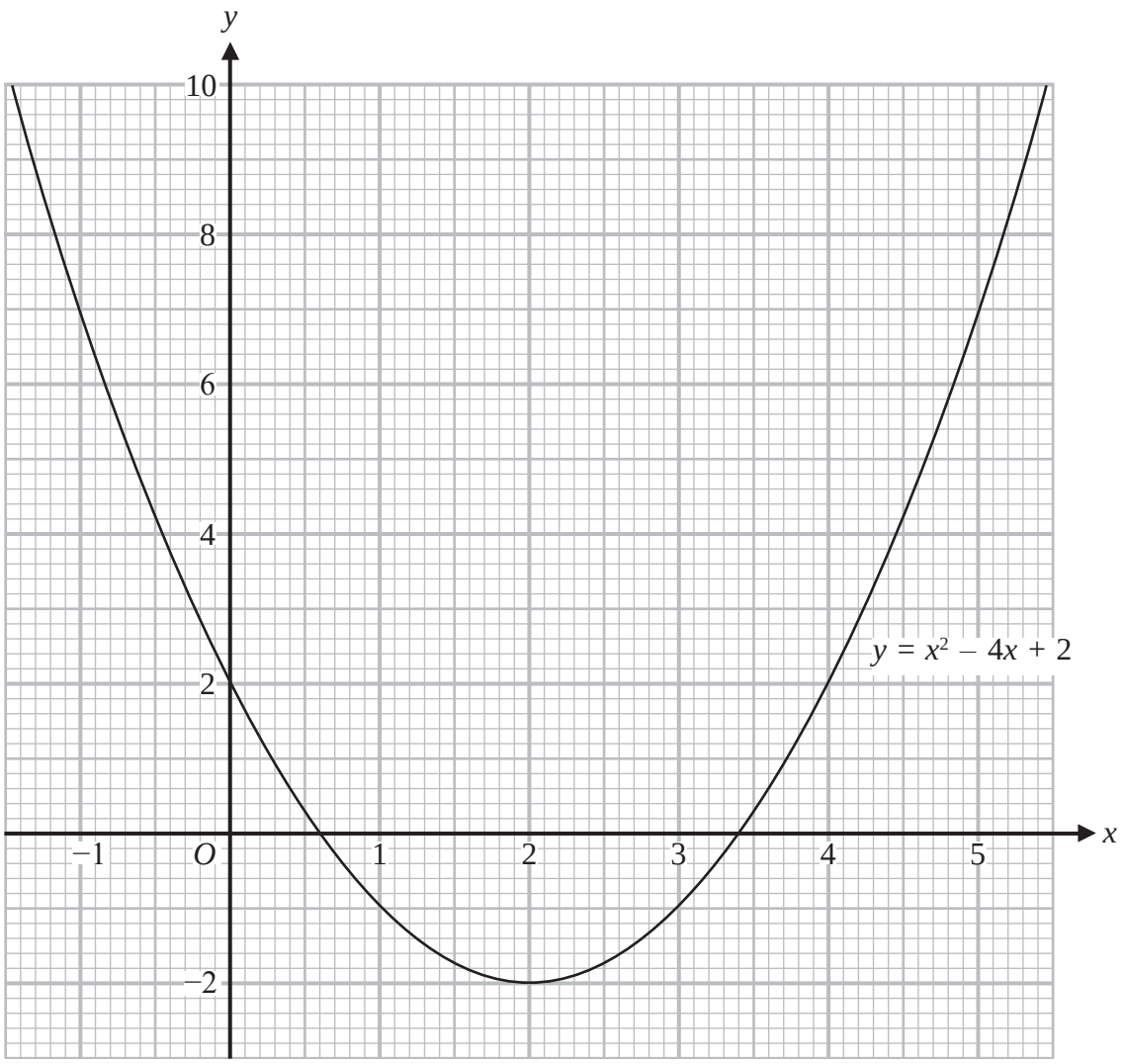
(a) Use these graphs to solve the simultaneous equations

$$5x - 9y = -46$$
$$y = -2x$$

$x =$ .....

$y =$ .....

(1)



(b) Use this graph to find estimates for the solutions of the quadratic equation $x^2 - 4x + 2 = 0$

.....

(2)

(Total for Question 28 is 3 marks)

15 (a) Expand $2(a + d)$

.....

(1)

(b) Factorise $6y^2 - 5y$

.....

(1)

(c) Solve $4x - 7 = 37$

$x =$.....

(2)

(Total for Question 15 is 4 marks)

27 Solve $x^2 - 7x - 18 = 0$

.....

(Total for Question 27 is 3 marks)

26 (a) Solve $\frac{5x}{2} + 3 > 18$

.....

(3)

(b) Factorise $x^2 + 10x + 9$

.....

(2)

(Total for Question 26 is 5 marks)

26 Solve $x^2 - 2x - 15 = 0$

.....

(Total for Question 26 is 3 marks)

6 (a) Solve $x + x + x + x = 20$

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

(b) Solve $y + 7 = 24$

$y =$ .....
(1)

(c) Solve $\frac{w}{2} = 4$

$w =$ .....
(1)

(Total for Question 6 is 3 marks)