

Forming and Solving Equations

Question Paper

Level	GCSE
Subject	Maths
Exam Board	Edexcel GCSE
Topic	Forming and Solving Equations
Grade Level	Grade 4
Booklet	Question Paper

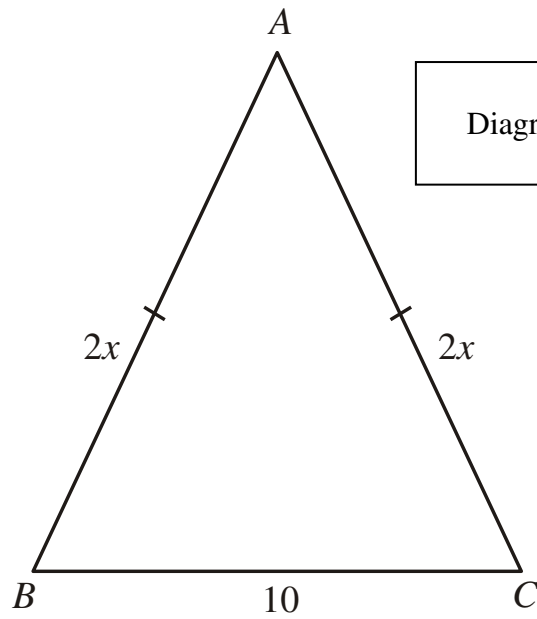
Time Allowed: 43 minutes

Score: /36

Percentage: /100

Grade Boundaries:

1.



In the diagram, all measurements are in centimetres.

ABC is an isosceles triangle.

$$AB = 2x$$

$$AC = 2x$$

$$BC = 10$$

- (a) Find an expression, in terms of x , for the **perimeter** of the triangle.
Simplify your expression.

.....

(2)

The perimeter of the triangle is 34 cm.

- (b) Find the value of x .

$x =$

(2)

(4 marks)

2.

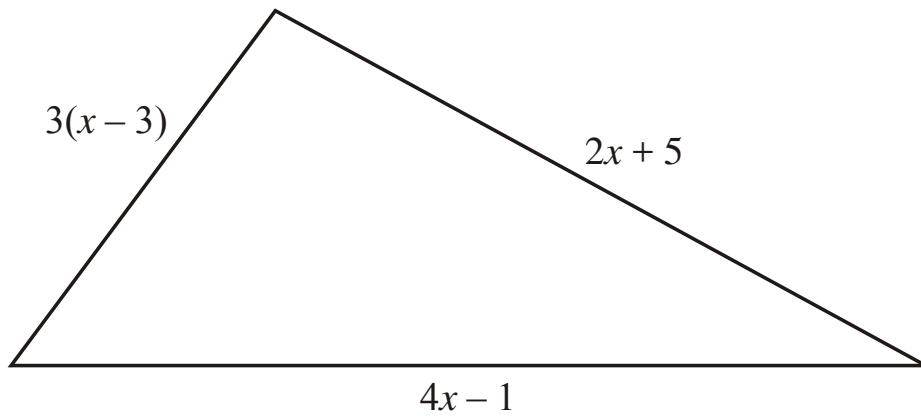


Diagram **NOT** accurately drawn

The lengths, in cm, of the sides of the triangle are $3(x-3)$, $4x-1$ and $2x+5$

(a) Write down, in terms of x , an expression for the perimeter of the triangle.

..... cm

(2)

The perimeter of the triangle is 49 cm.

(b) Work out the value of x .

$x = \dots\dots\dots$

(2)

(4 marks)

3.

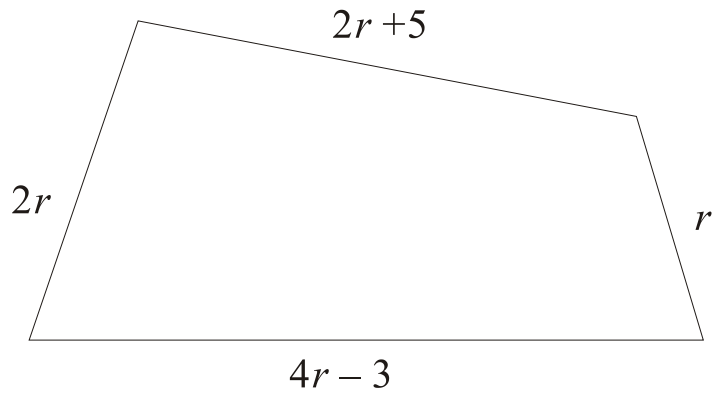


Diagram **NOT** accurately drawn

In the diagram, all measurements are in centimetres.

The lengths of the sides of the quadrilateral are

- $2r + 5$
- $2r$
- $4r - 3$
- r

- (a) Find an expression, in terms of r , for the perimeter of the quadrilateral.
Give your expression in its simplest form.

.....

(2)

The perimeter of the quadrilateral is 65 cm.

- (b) Work out the value of r .

$r =$

(2)

(4 marks)

4.

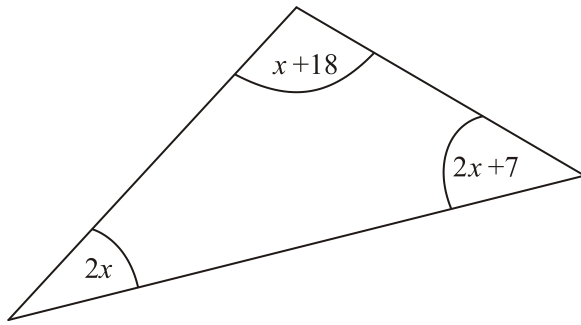


Diagram **NOT**
accurately drawn

The sizes of the angles, in degrees, of the triangle are

$$2x + 7$$

$$2x$$

$$x + 18$$

(a) Use this information to write down an equation in terms of x .

.....

(2)

(b) Use your answer to part (a) to work out the value of x .

$$x = \text{.....}$$

(2)

(4 marks)

5.

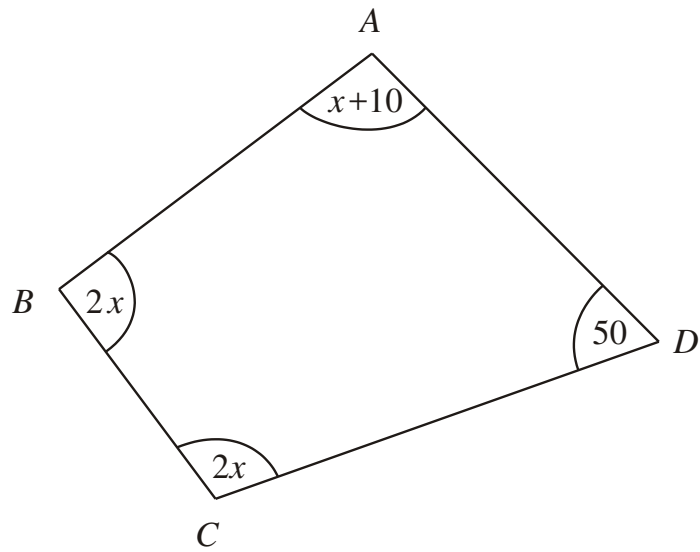


Diagram **NOT** accurately drawn

In this quadrilateral, the sizes of the angles, in degrees, are

- $x + 10$
- $2x$
- $2x$
- 50

(a) Use this information to write down an equation in terms of x .

.....

(2)

(b) Work out the value of x .

$x = \dots\dots\dots$

(3)

(5 marks)

6.

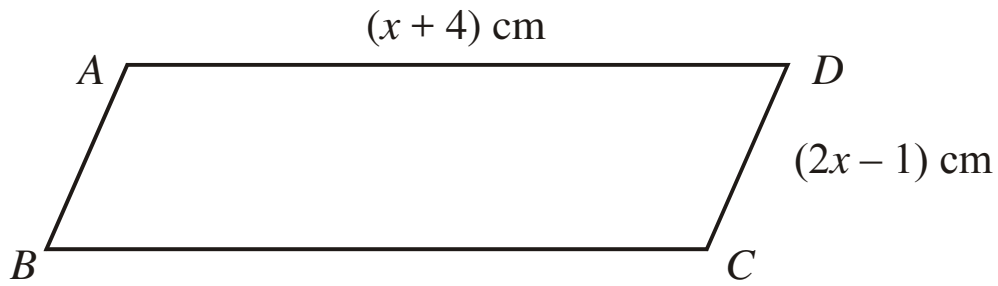


Diagram **NOT** accurately drawn

$ABCD$ is a parallelogram.

$AD = (x + 4)$ cm,

$CD = (2x - 1)$ cm.

The perimeter of the parallelogram is 24 cm.

(i) Use this information to write down an equation, in terms of x .

.....

(ii) Solve your equation.

$x =$

(4 marks)

7. The perimeter of this triangle is 19 cm.
All lengths on the diagram are in centimetres.

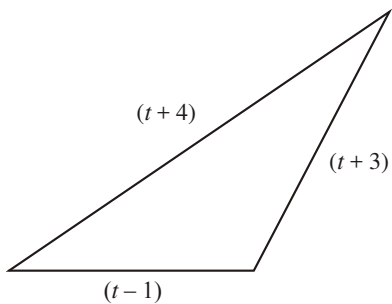


Diagram **NOT** accurately drawn

Work out the value of t .

$t = \dots\dots\dots$

(3 marks)

- 8.

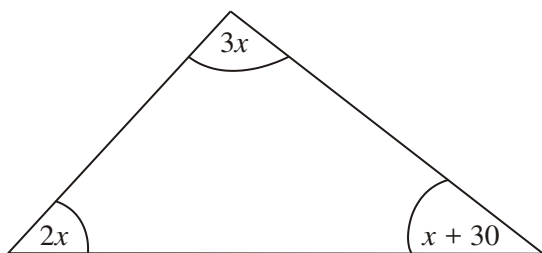


Diagram **NOT** accurately drawn

The diagram shows a triangle.
The sizes of the angles, in degrees, are

- $3x$
- $2x$
- $x + 30$

Work out the value of x .

$x = \dots\dots\dots$

(3 marks)

9.

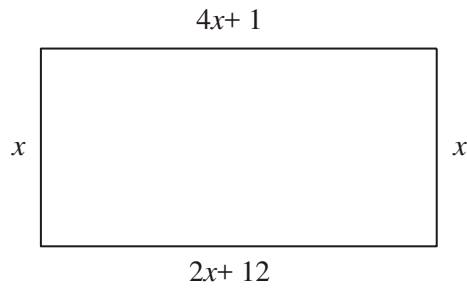


Diagram **NOT** accurately drawn

The diagram shows a rectangle.
All the measurements are in centimetres.

(a) Explain why $4x + 1 = 2x + 12$

.....
.....

(1)

(b) Solve $4x + 1 = 2x + 12$

$x = \dots\dots\dots$

(2)

(c) Use your answer to part (b) to work out the perimeter of the rectangle.

$\dots\dots\dots$ cm

(2)

(5 marks)
