Write your name, centre number and candidate number in the boxes below.

Surname	Other names

Centre number | | | | | |

Candidate number | | | | |

STEM | Exam Builder

Area and perimeter

Time allowed: 45 minutes

Subject code **0580**

Mathematics

Questions from Paper 1, Paper 2, Paper 3 and Paper 4

You must have: a ruler marked in centimetres and millimetres, a protractor, compasses, a pen, an HB pencil and an eraser.
You may use a calculator.

Total marks

/ 34

Instructions

- Answer every question in the space provided on this paper.
- Write in black or dark blue ink. Pencil may be used for diagrams and graphs.
- Fill in your name, centre number and candidate number above.
- Show your working: a correct method can earn marks even if the answer is wrong.
- Unless a question says otherwise, give answers that are not exact to 3 significant figures, and angles in degrees to 1 decimal place.

Information

- This paper has 10 questions worth 34 marks in total.
- The marks for each question or part are shown in brackets, for example [3].

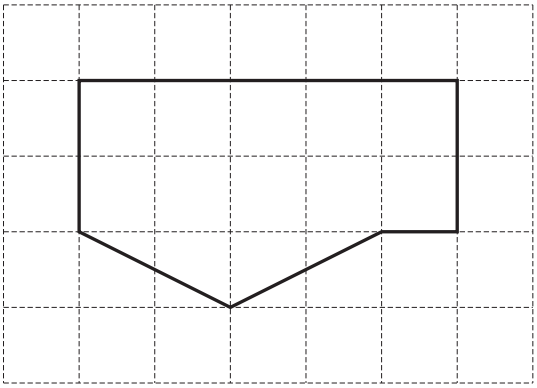
Advice

- Read every question through once before you write anything.
- Use the marks in brackets to judge how long to spend on each part.
- If you finish early, go back and check your working.

STEM | Exam Builder

Print at 100% (Actual size) so diagrams keep their real measurements.

1 The diagram shows a shape on a 1 cm^2 grid.

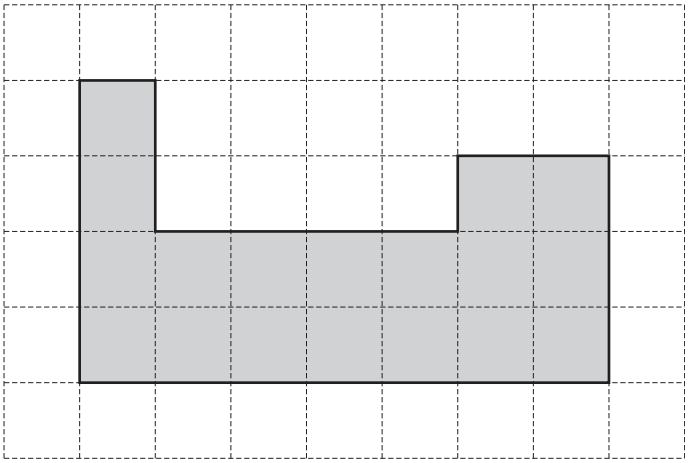


Find the area of this shape.

..... cm^2 [1]

Area Click for more variations

2



This shape is drawn on a 1 cm^2 grid.

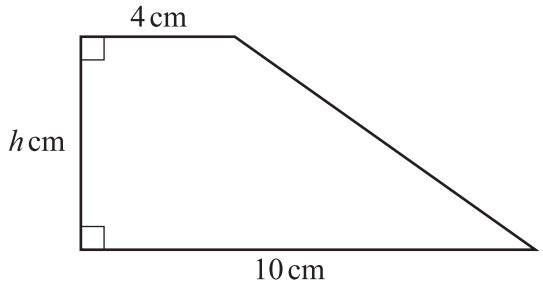
Find the perimeter of the shape.

..... cm [1]

Perimeter Click for more variations

STEM | Exam Builder

3



NOT TO SCALE

The diagram shows a trapezium.
The area of the trapezium is $42\,cm^2$.

Work out the value of h.

$h =$ ..... [2]

Area Click for more variations

4 The area of a triangle is $528\,cm^2$.
The length of its base is 33 cm.

Calculate the perpendicular height of the triangle.

..... cm [2]

Area Click for more variations

STEM | Exam Builder

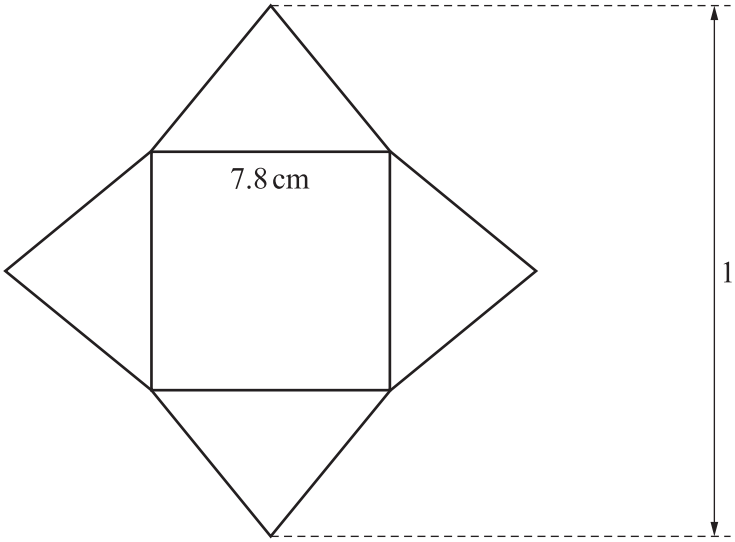
5 The total perimeter of a semicircle is 19.02 cm.

Calculate the radius of the semicircle.

..... cm [3]

Perimeter Click for more variations

6 The diagram shows a shape made from a square and four congruent isosceles triangles.



NOT TO SCALE

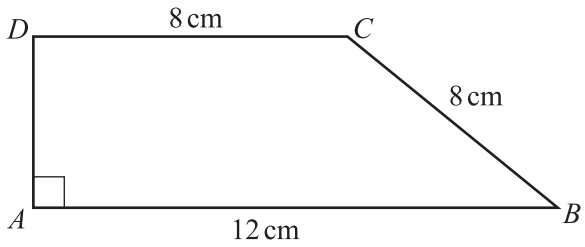
Work out the area of this shape.

STEM | Exam Builder

..... cm^2 [3]

Adding and subtracting areas Click for more variations

7



NOT TO SCALE

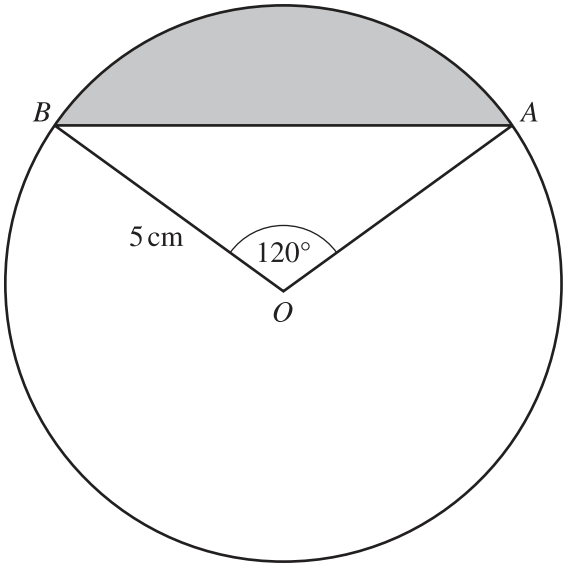
Calculate the area of this trapezium.

..... cm^2 [4]

Area Click for more variations

STEM | Exam Builder

8



NOT TO SCALE

A and B lie on a circle centre O, radius 5 cm.
Angle $AOB = 120°$.

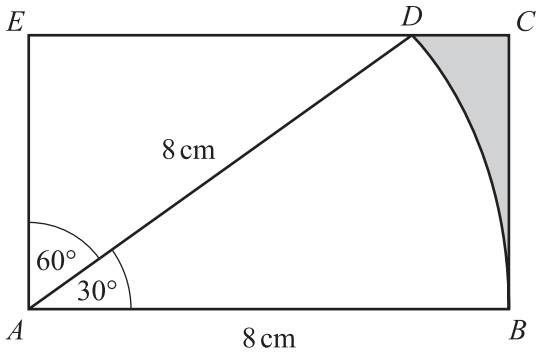
Find the area of the shaded segment.

Answer ..... cm^2 [4]

Adding and subtracting areas Click for more variations

STEM | Exam Builder

9



NOT TO SCALE

The diagram shows a rectangle $ABCE$.
D lies on EC.
DAB is a sector of a circle radius 8 cm and sector angle 30°.

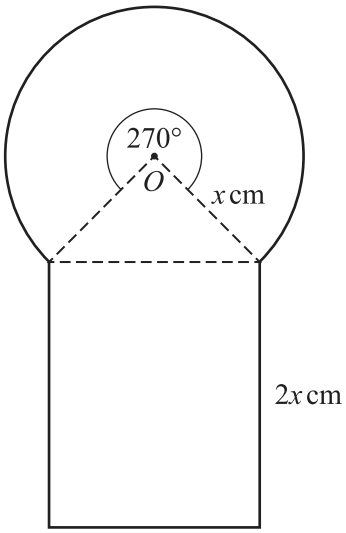
Calculate the area of the shaded region.

Answer ..... cm^2 [7]

Adding and subtracting areas Click for more variations

STEM | Exam Builder

10



NOT TO SCALE

The diagram shows a sector of a circle, a triangle and a rectangle.
The sector has centre O, radius x cm and angle 270°.
The rectangle has length $2x$ cm.

The total area of the shape is kx^2 cm^2.

(a) Find the value of k.

$k =$ ..... [5]

(b) Find the value of x when the total area is 110 cm^2.

$x =$ ..... [2]

(a) Adding and subtracting areas (b) Solving quadratics by factorising Click for more variations

STEM | Exam Builder