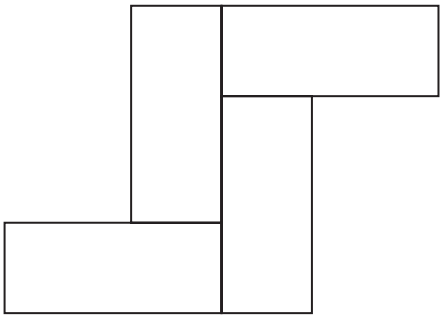
Autumn 2017 Paper 3 Q6

1 Here is a rectangle.

The length of the rectangle is 7 cm longer than the width of the rectangle.

4 of these rectangles are used to make this 8-sided shape.



The perimeter of the 8-sided shape is 70 cm.

Work out the area of the 8-sided shape.

..... cm^2

(Total for Question 1 is 5 marks)

Summer 2018 Paper 1 Q8

2 The perimeter of a right-angled triangle is 72 cm.
The lengths of its sides are in the ratio 3 : 4 : 5

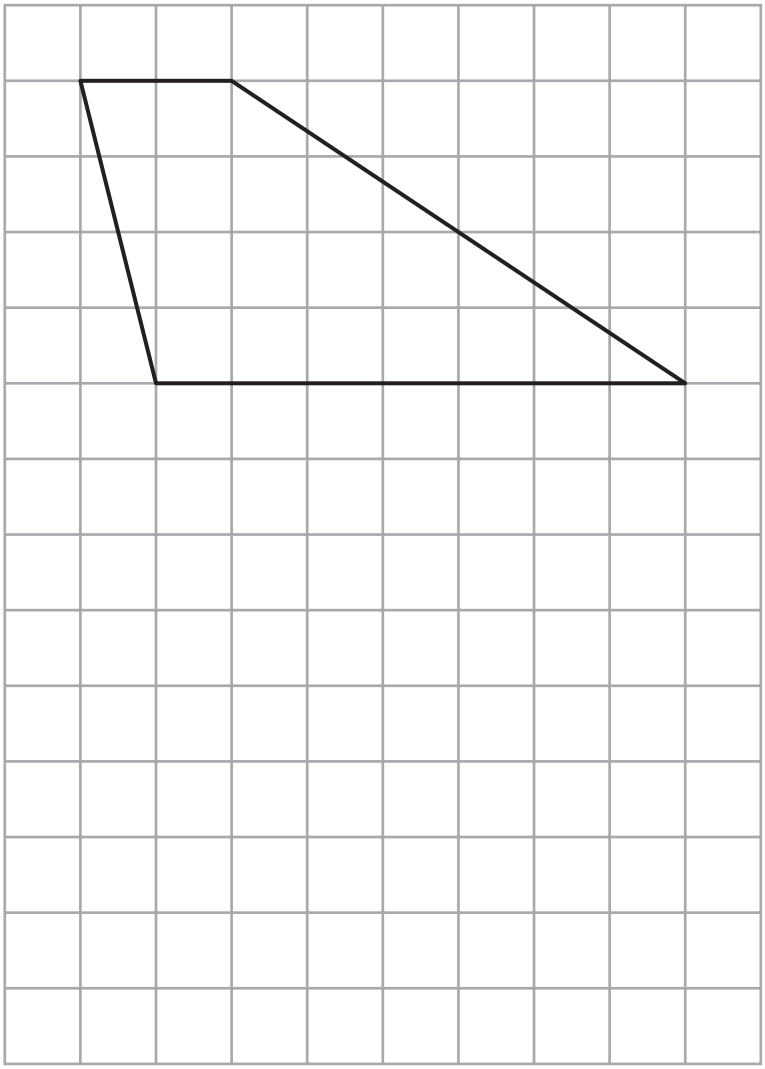
Work out the area of the triangle.

.....cm^2

(Total for Question 2 is 4 marks)

Summer 2018 Paper 3 Q3

3 Here is a trapezium drawn on a centimetre grid.

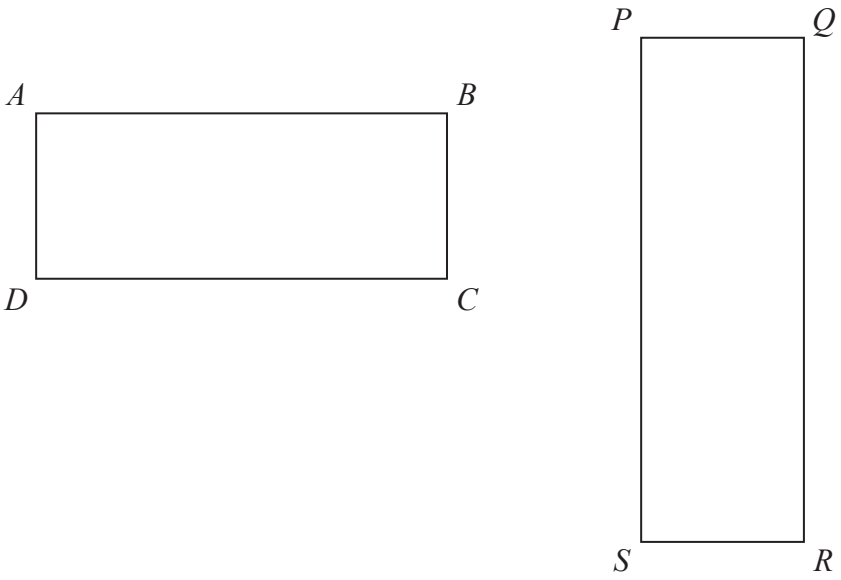


On the grid, draw a triangle equal in area to this trapezium.

(Total for Question 3 is 2 marks)

Summer 2019 Paper 1 Q7

4 Here are two rectangles.



$QR = 10\,\text{cm}$
$BC = PQ$

The perimeter of $ABCD$ is 26 cm
The area of $PQRS$ is $45\,\text{cm}^2$

Find the length of AB.

..... cm

(Total for Question 4 is 4 marks)

Summer 2020 Paper 3 Q4

5 Maisie knows that she needs 3 kg of grass seed to make a rectangular lawn 5 m by 9 m.

Grass seed is sold in 2 kg boxes.

Maisie wants to make a rectangular lawn 10 m by 14 m.
She has 5 boxes of grass seed.

(a) Has Maisie got enough grass seed to make a lawn 10 m by 14 m?
You must show all your working.

(4)

Maisie opens the 5 boxes of grass seed.

She finds that 4 of the boxes contain 2 kg of grass seed.
The other box contains 1 kg of grass seed.

(b) Does this affect whether Maisie has enough grass seed to make her lawn?
Give a reason for your answer.

.....

.....

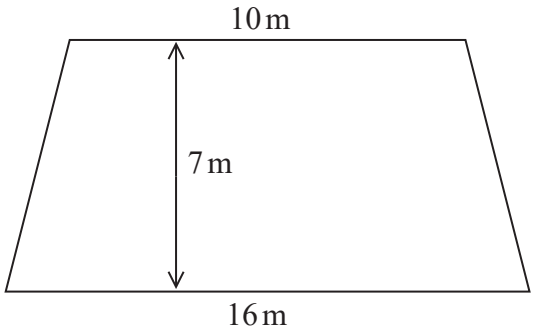
.....

(1)

(Total for Question 5 is 5 marks)

Autumn 2018 Paper 2 Q5

6 The diagram shows a floor in the shape of a trapezium.



£16.99

John is going to paint the floor.

Each 5 litre tin of paint costs £16.99
1 litre of paint covers an area of 2 m^2

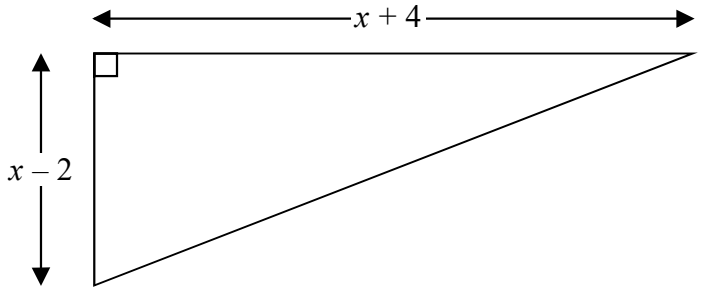
John has £160 to spend on paint.

Has John got enough money to buy all the paint he needs?
You must show how you get your answer.

(Total for Question 6 is 5 marks)

Autumn 2019 Paper 1 Q14

7 The diagram shows a right-angled triangle.



All the measurements are in centimetres.

The area of the triangle is 27.5 cm^2

Work out the length of the shortest side of the triangle.
You must show all your working.

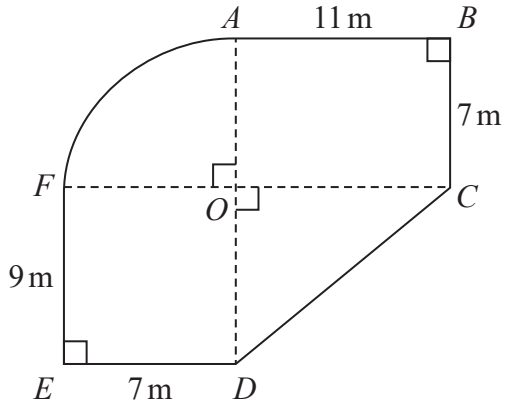
..... cm

(Total for Question 7 is 4 marks)

Autumn 2022 Paper 1 Q4

8 The diagram shows a plan of Jason's garden.

ABCO and *DEFO* are rectangles.
CDO is a right-angled triangle.
AFO is a sector of a circle with centre *O* and angle *AOF* = 90°



Jason is going to cover his garden with grass seed.
Each bag of grass seed covers 14 m^2 of garden.
Each bag of grass seed costs £10.95

Work out how much it will cost Jason to buy all the bags of grass seed he needs.

£.....

(Total for Question 8 is 5 marks)

Summer 2022 Paper 2 Q4

9 Festival A will be in a rectangular field with an area of 80 000 m^2
The greatest number of people allowed to attend Festival A is 425

Festival B will be in a rectangular field 700 m by 2000 m.
The greatest number of people allowed to attend Festival B is 6750

The area per person allowed for Festival B is greater than the area per person allowed for Festival A.

(a) How much greater?
Give your answer correct to the nearest whole number.

..... m^2

(4)

Callum says,

"300 cm^2 is the same as 3 m^2 because there are 100 cm in 1 m so you divide by 100"

Callum's method is wrong.

(b) Explain why.

.....

.....

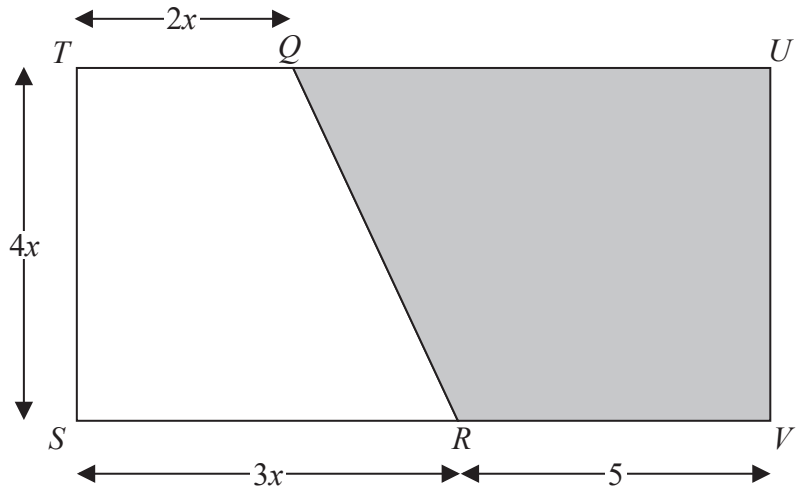
.....

(1)

(Total for Question 9 is 5 marks)

Summer 2022 Paper 3 Q7

10 The diagram shows rectangle *STUV*.
TQU and *SRV* are straight lines.
All measurements are in cm.



The area of trapezium *QUVR* is A cm^2

Show that $A = 2x^2 + 20x$

(Total for Question 10 is 3 marks)