

Name: _____

Exam Style Questions

Scales and Maps



Corbettmaths

Equipment needed: Ruler, Calculator, Pencil and Pen

Guidance

1. Read each question carefully before you begin answering it.
2. Check your answers seem right.
3. Always show your workings

Video Tutorial

www.corbettmaths.com/contents

Video 283



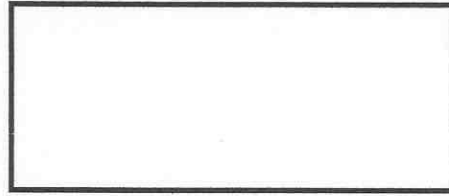
Answers and Video Solutions



1. Shown below is a rectangle.

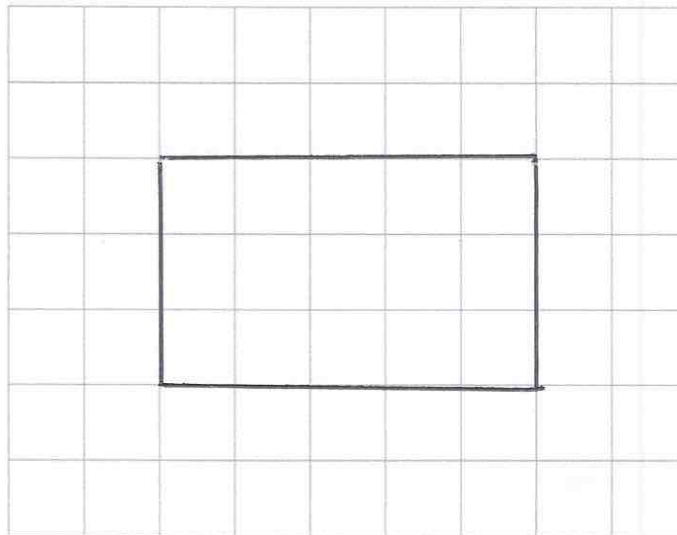


12km



20km

Draw an accurate scale drawing of the rectangle on the centimetre grid below.
Use a scale of 1cm represents 4km.



$$12 \div 4 = 3$$

$$20 \div 4 = 5$$

(2)

2. A map has a scale of 1cm : 3 miles.
On the map, the distance between two towns is 7cm.



What is the actual distance between the two towns?
Include units for your answer.

$$7 \times 3 = 21$$

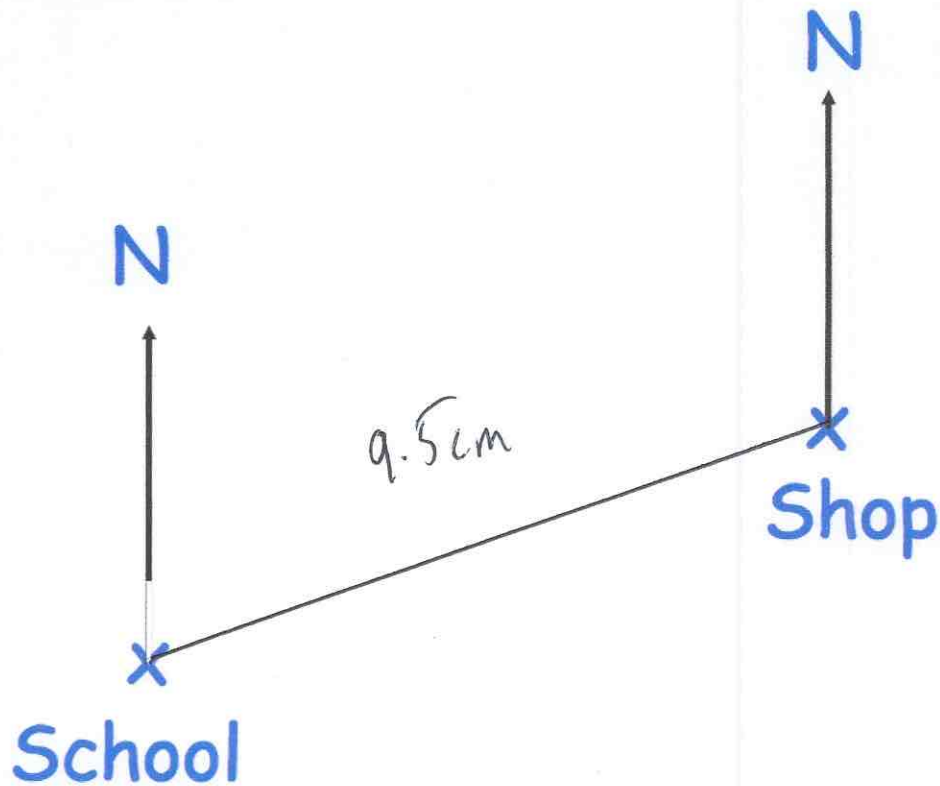
21 miles

(2)

3.



The diagram shows part of a map.
It shows the position of a school and a shop.



The scale of the map is 1 cm = 100 metres.

Work out the real distance between the school and the shop.
Give your answer in metres.

$$9.5 \times 100 = 950$$

950
.....m
(2)

4.



A map has a scale of 1 cm : 4 kilometres.
The actual distance between two cities is 52 kilometres.

What is the distance between the cities on the map?

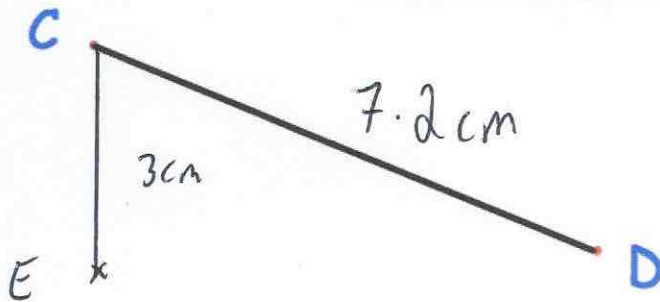
$$52 \div 4 = 13$$

13
.....cm
(1)

5. The diagram shows a scale drawing.



Scale: 1cm represents 100km



- (a) Use the diagram to calculate the actual distance from C to D.

$$7.2 \times 100 = 720$$

720
.....km
(2)

E is 300km due south of C.

- (c) Show E on the diagram.

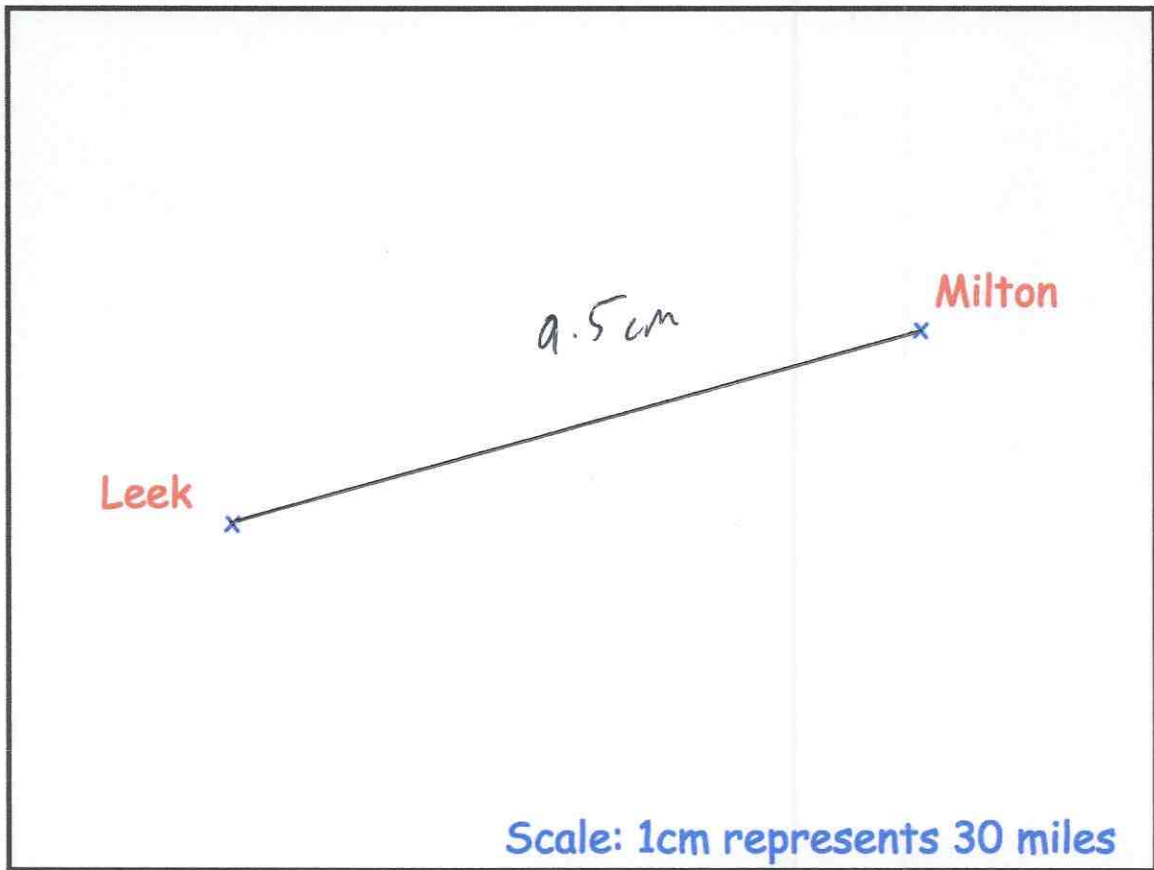
3cm

(1)

6.

Here is a map.

The map shows two cities, Leek and Milton.



(a) Use the map to calculate the actual distance from Leek to Milton.

$$9.5 \times 30 = 285$$

285
.....miles
(2)

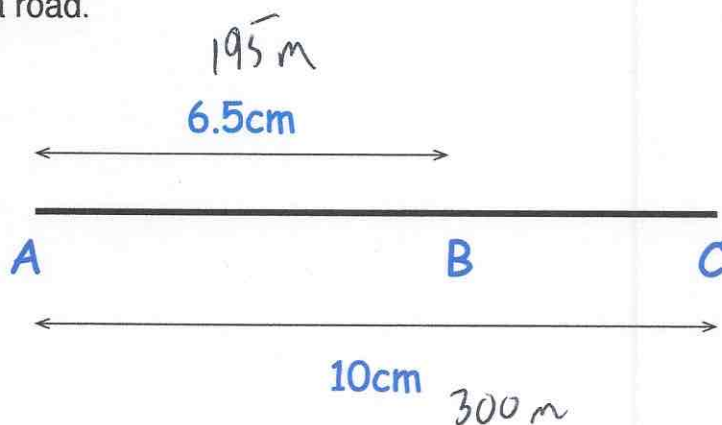
located at the midpoint of
Sandville is an equal distance from Leek and Milton

(b) How far is Sandville from Leek?

$$285 \div 2 = 142.5$$

142.5
.....miles
(1)

7. The diagram shows the position of three lampposts, A, B and C, on a scale drawing of a road.



The scale drawing has a scale of $1\text{cm} = 30\text{m}$

Work out the actual distance between lamppost B and lamppost C.

$$10 \times 30 = 300$$

$$6.5 \times 30 = 195$$

$$300 - 195 = 105$$

105
.....m
(3)

8. In a garden, there is an oak tree and an apple tree.



Anna draws a scale drawing of the apple tree.

She uses a scale of 1cm represents 2.4m

The height of the apple tree on her scale drawing is 3.75cm

The actual height of the oak tree is 1.9 times the height of the apple tree.

Work out the actual height of the oak tree.

$$2.4 \times 3.75 = 9\text{m (apple tree)}$$

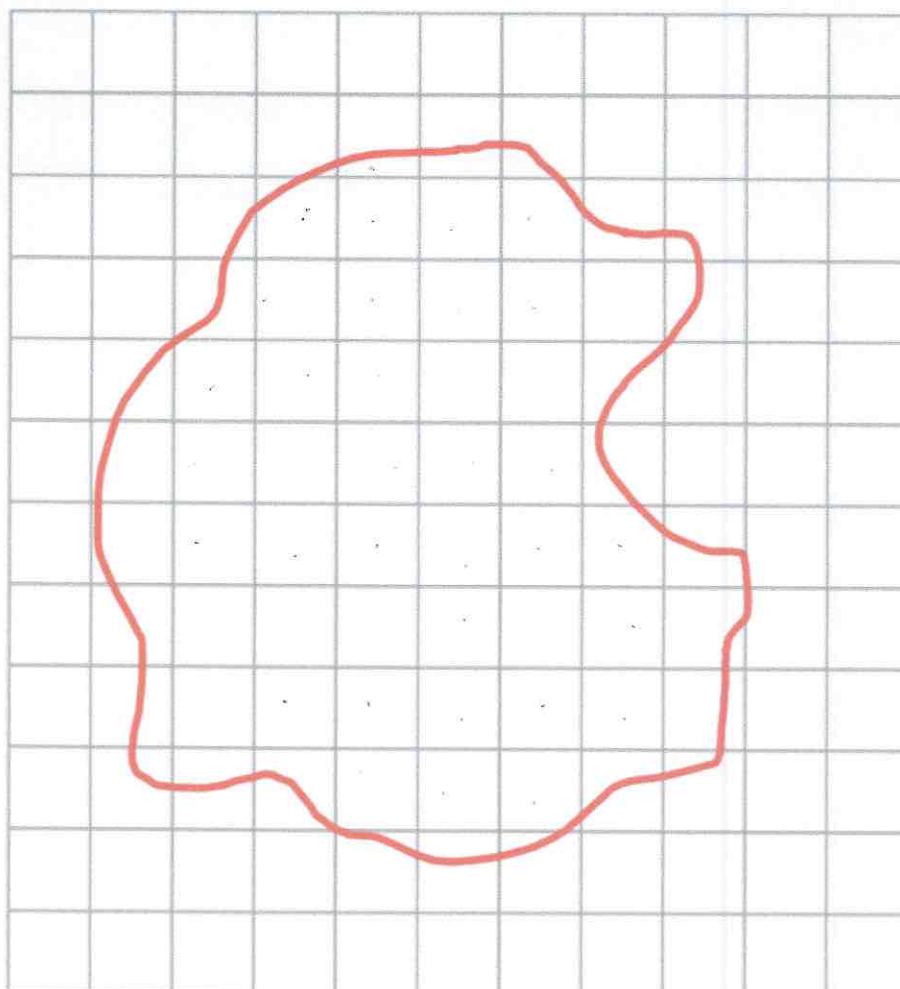
$$9 \times 1.9 = 17.1\text{m}$$

17.1
.....m
(3)

9.



Shown is a scale drawing of an island.
Each square on the grid has an area of 1cm^2



The scale is 1cm^2 represents 10km^2

Find an estimate for the area of the island.
Give your answer in km^2

Allow range of 450km^2 to 500km^2 (inclusive)

480
..... km^2
(3)

10. A farmer makes a scale drawing of his rectangular field.
On the scale drawing, the field has a length of 24cm and width of 5.2cm



The actual width of the field is 72.8 metres

Work out the actual length of the field.

Give your answer in metres.

$$72.8 \div 5.2 = 14$$

Scale
1cm represents 14m

$$24 \times 14 = 336$$

336 m
(3)

11. A map has a scale of 1cm represents 2km.



(a) Write this scale as a ratio in its simplest form.

2000 m

200000 cm

1 : 200000

1 : 200000
(2)

(b) What is the actual length of a road measuring 5.5cm on the map?

$$5.5 \times 2 = 11$$

11 km
(1)

12. A map has a scale of 1cm represents 50 metres.



(a) Put a circle around the ratio which is equivalent to this.

5000cm

1:50

1:500

1:5000

1:50000

1:500000

1:5000000

(2)

The distance between two shops on the map is 4.5cm

(b) What is the actual distance between the shops?

$$4.5 \times 50 = 225$$

225.....m
(2)

13. A map has a scale of 8cm to 1km.



(a) Write this scale as a ratio in its simplest form.

1000m

100000cm

$$8 : 100000$$

$$4 : 50000$$

$$2 : 25000$$

$$1 : 12500$$

1:12500
(2)

The distance between two lakes is 4.5km

(b) How far will this be on the map?

$$8 \times 4.5 = 36$$

36.....cm
(2)

14. A map has a scale of 1:4000
On the map, the distance between two houses is 9cm.



What is the actual distance between the houses?
Give your answer in metres.

$$9 \times 4000 = 36000 \text{ cm}$$

360
.....m
(3)

15. Jordan has a map with a scale of 1:75000



The distance between two towns is 8cm on the map.

Work out the distance, in kilometres, between the towns.

$$8 \times 75000 = 600000 \text{ cm}$$

6000 m

6 km

6
.....km
(3)

16. A scale drawing has a scale of 1:20
In real life the length of a boat is 150m



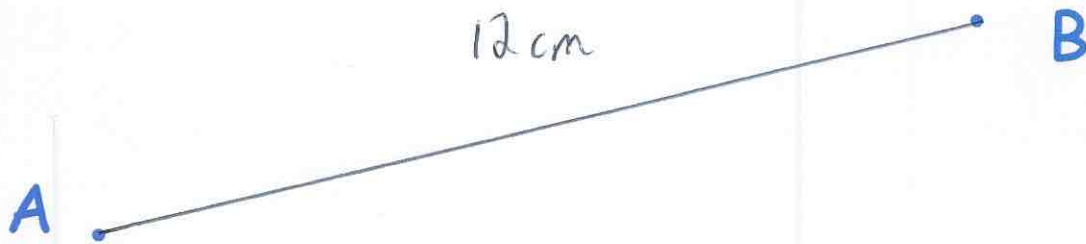
What is the length of the boat on the scale drawing?
Give your answer in centimetres.

$$150 \div 20 = 7.5 \text{ m}$$

750 cm

750
.....cm
(3)

17. The map shows the location of two towns, A and B.



Scale: 1 cm represents 8 km

A helicopter departs town A at 21:52 and flies directly to town B.
The helicopter travels at an average speed of 120 km/h

What time does the helicopter arrive at town B?

$$8 \times 12 = 96 \text{ km}$$

$$t = \frac{96}{120} = 0.8 \text{ hours}$$

$$0.8 \times 60 = 48 \text{ mins}$$

22:40

(5)