



GCSE Foundation 19

Shape, space and measure



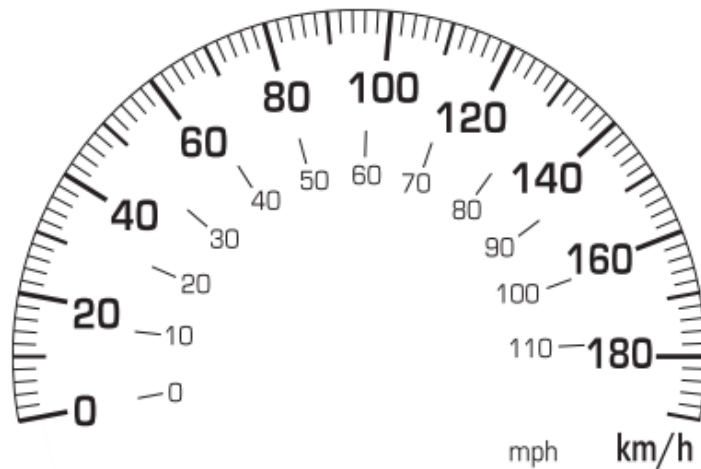
58 minutes



55 marks

Measures

Q1. The diagram shows a speedometer on a car bought in France.



- (a) The speed limit on a road in France is 110 kilometres per hour (km/h).
Use the speedometer to estimate this speed in miles per hour (mph).

Answer mph

(1)

- (b) The speed limit on a road in England is 30 mph.
Use the speedometer to estimate this speed in km/h.

Answer km/h

(1)

- (c) Marie has 56 litres of diesel in her car.
The car uses 1 litre of diesel for every 19 kilometres travelled.

She wants to drive to Paris, a distance of 1100 kilometres.

Does she have enough diesel for the journey?

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(3)

(Total 5 marks)

Q2. The diagram shows two different sweets and their weights.



The sweets are sold in bags.
Each bag contains 120 grams of sweets.

- (a) How many of sweet A are needed to fill one bag?

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Answer

(2)

- (b) A 120-gram bag is filled with the same number of each sweet.

How many of each sweet are in the bag?

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Answer

(3)

- (c) The 120-gram bags are put into boxes.
The total weight of the bags in each box is 6 kilograms.

How many bags are in each box?

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Answer

(3)

- (d) The 120-gram bags are sold for £1.99 each.
The sweets are also sold loose at 100 grams for £1.59

Which is better value?

You **must** show your working.

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(3)
(Total 11 marks)

Q3. Here are instructions for cooking a turkey.

Cook for 15 minutes at 220 °C
Reduce the oven temperature to 160 °C
and cook for 40 minutes per kilogram.

Kirsty is going to cook a 7 kilogram turkey.

She wants to take it out of the oven at 12.45 pm.

At what time must she start to cook it?

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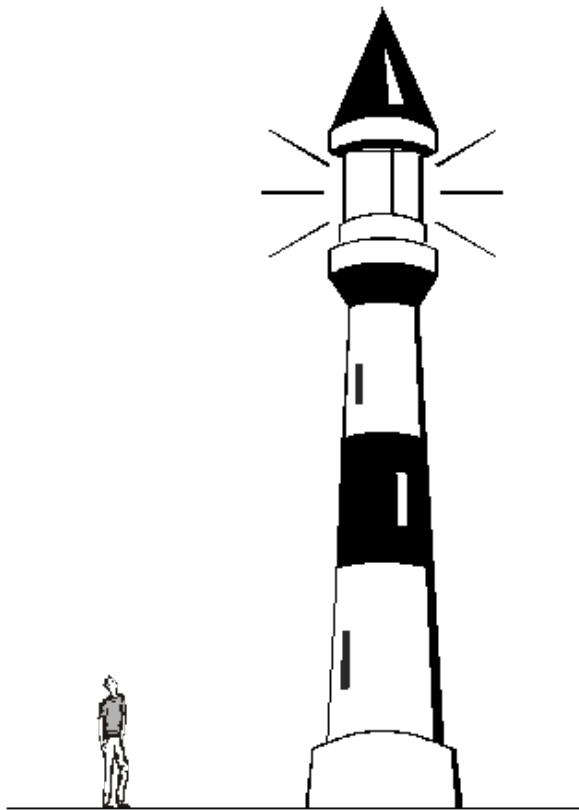
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Answer

(Total 4 marks)

Q4. Use the diagram to estimate the height of the lighthouse.



Answer m

(Total 3 marks)

Q5. Large areas can be measured in hectares.

1 hectare is $10\,000\text{ m}^2$.



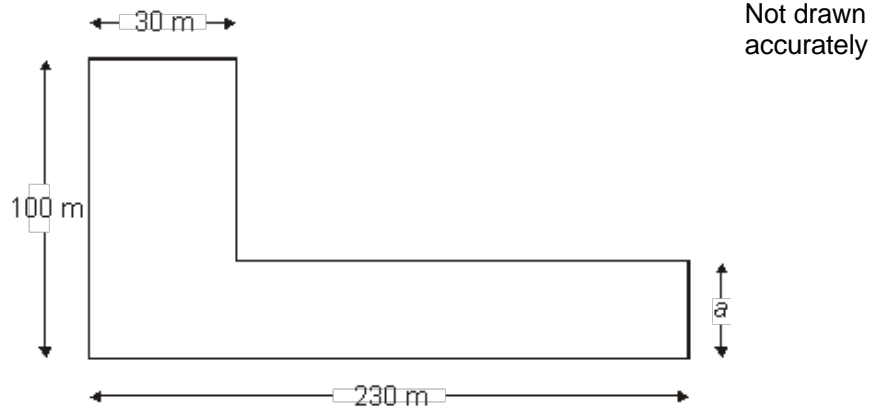
(a) Explain why the diagram represents 1 hectare.

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(1)

- (b) This L-shape has an area of one hectare.
All lengths are a whole number of metres.



Work out the value of a .
Give your answer in metres.

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Answer m

(3)
(Total 4 marks)

Q6. The speed limit through some roadworks is 50 mph.

Cameras recorded the time taken for a car to travel 600 m through the roadworks as 27 seconds.

10 mph is approximately 4.47 m/s

Was the car speeding through the roadworks?

You **must** show your working.

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(Total 4 marks)

Q7. (a) Use one of the following numbers to complete each conversion.

1.75 2.2 4.5 8 30

1 kilogram is approximately pounds.

1 foot is approximately centimetres.

1 litre is approximately pints.

(2)

- (b) You are given that 5 mph is approximately 8 km/h.

Billy is planning to drive in Spain where the motorway speed limit is 120 km/h.
He is used to driving on motorways in the UK where the speed limit is 70 mph.

Which is faster, 120 km/h or 70 mph?

You **must** show your working.

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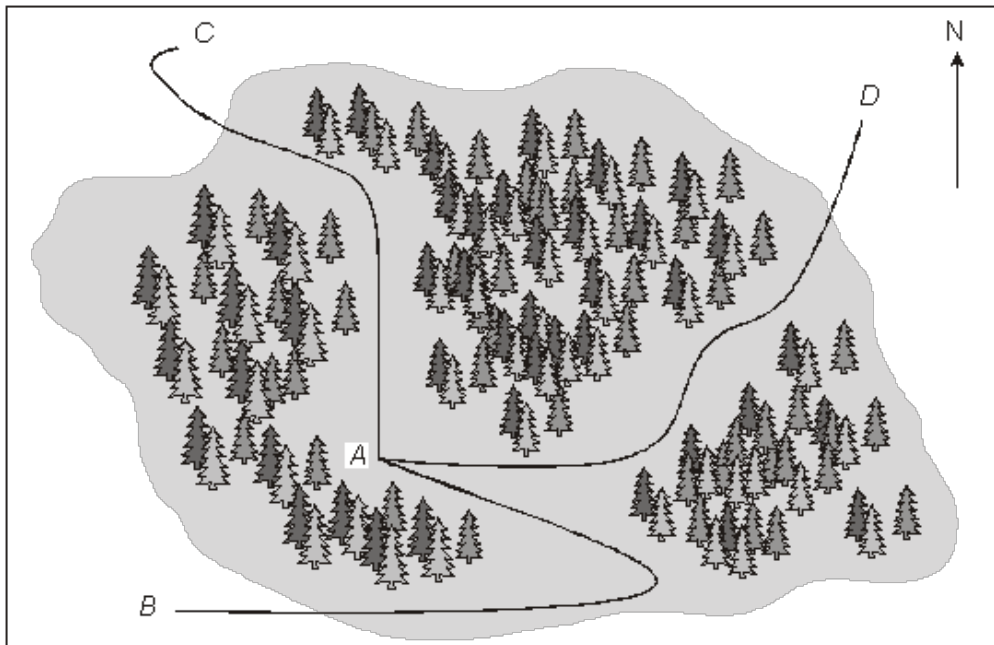
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Answer

(3)

(Total 5 marks)

- Q8.** The diagram shows a map of three paths AB , AC and AD through a wood.



- (a) A rambler wants to walk towards her house from point A .
Her house is to the north-west of the wood.

Which path should she take?

Answer

(1)

- (b) A warden wants to know the length of the path from *D* to *A*.
 He walks along the path.
 It takes him 40 minutes.
 He knows that he walks at 3 miles an hour.

How long is the path?

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Answer miles

(2)

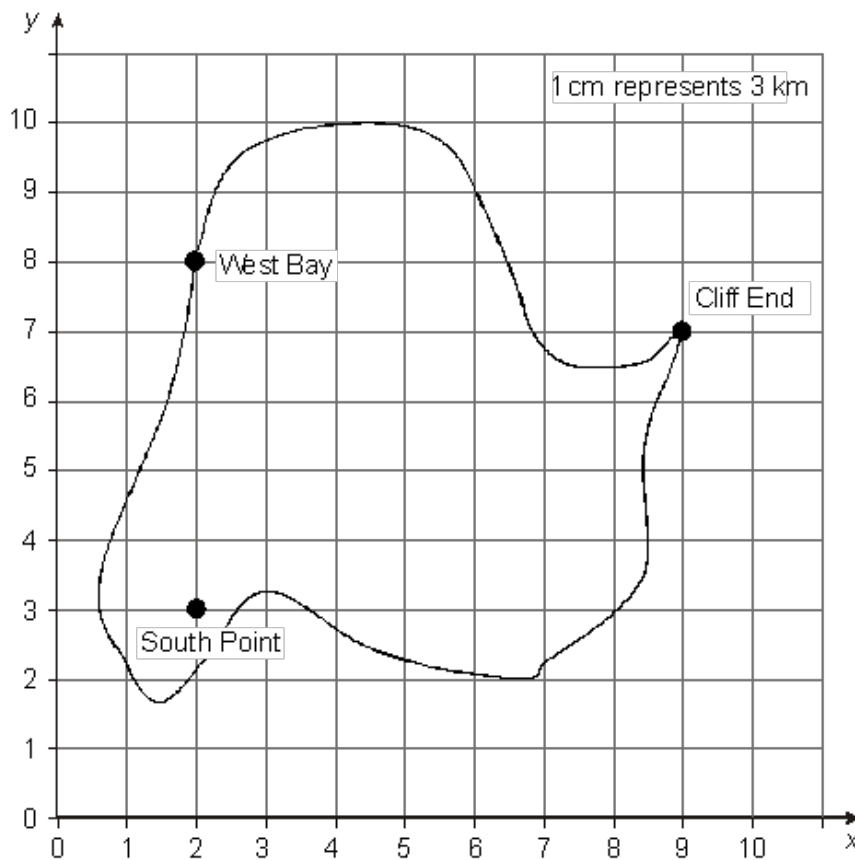
- (c) Measure the three-figure bearing of *D* from *A*.

Answer °

(1)

(Total 4 marks)

- Q9.** A map is drawn on a centimetre grid.
 1 cm represents 3 km.



- (a) Write down the coordinates of South Point.

Answer (..... ,)

(1)

- (b) Write down the coordinates of West Bay.

Answer (..... ,)

(1)

- (c) Work out the actual distance between South Point and West Bay.

.....

Answer km

(2)

(Total 4 marks)

Q10. Which metric unit would you use to measure the following?

- (a) The length of a pencil

Answer

(1)

- (b) The amount of petrol in a car's tank

Answer

(1)

- (c) The area of a football pitch

Answer

(1)

- (d) The weight of a bus

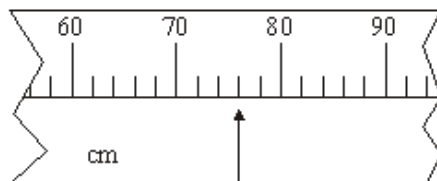
Answer

(1)

(Total 4 marks)

Q11. Give the values shown by the arrows on these scales.

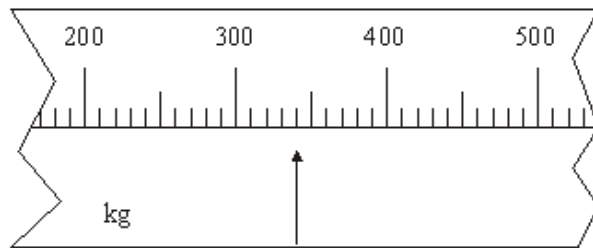
- (a)



Answer cm

(1)

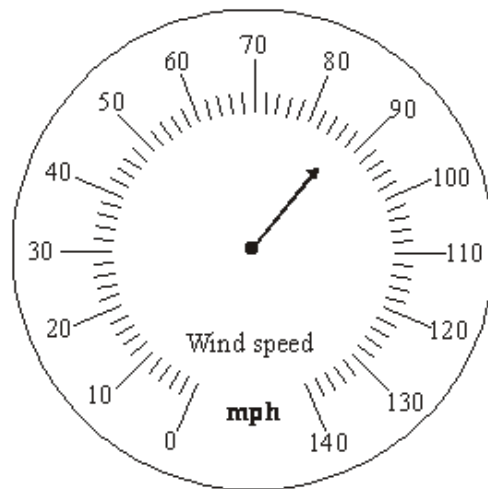
(b)



Answer kg

(1)

(c)

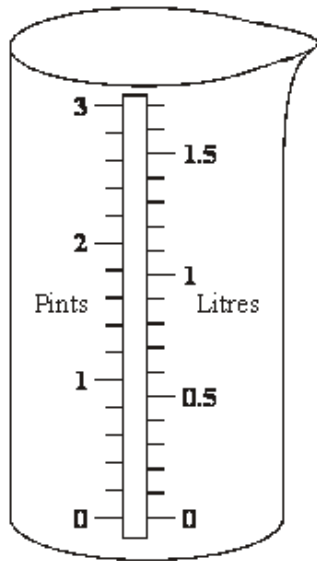


Answer mph

(1)

(Total 3 marks)

Q12. This scale shows pints and litres.



- (a) Draw an arrow on the scale to show 2.5 pints.

(1)

- (b) Use the scale to estimate how many pints are in 1 litre.

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Answer pints

(1)

- (c) Estimate the number of litres in 8 pints.

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Answer litres

(2)

(Total 4 marks)

