testbase

week 16

Length

Name: _____

Class: _____

Date: _____

Time: **33 minutes**

Marks: **32 marks**

Comments:

1 On a map, 1 cm represents 20 km.

0   20   40   60   80   100

kilometres
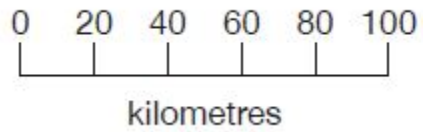
The distance between two cities is **250 km**.
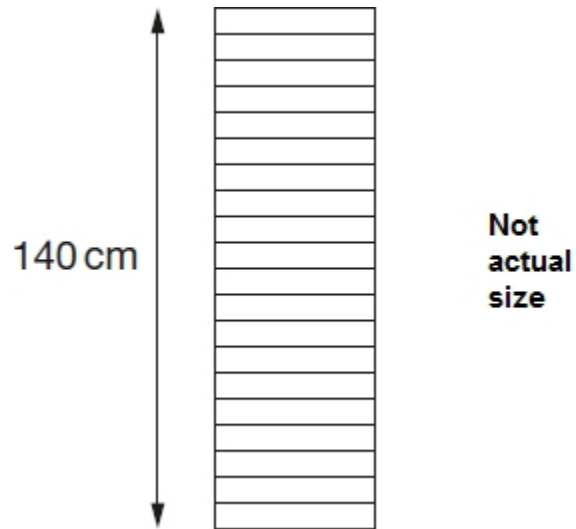
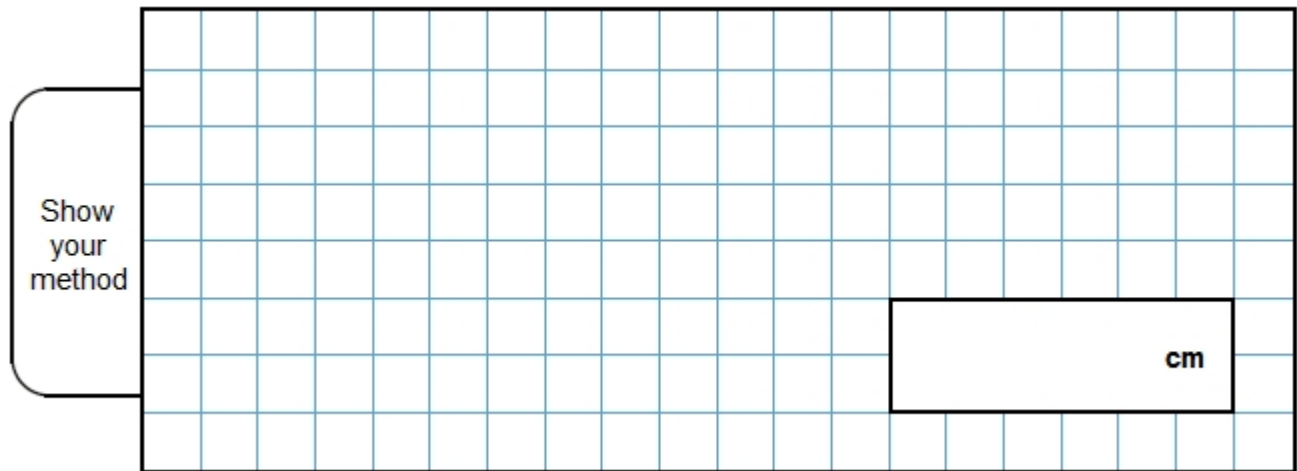On the map, what is the distance between the two cities?

Show your method

cm

2 marks

2 A stack of 20 identical boxes is 140 cm tall.

140 cm

Not actual size

Stefan takes **three** boxes off the top.

How tall is the stack now?

Show your method

cm

2 marks

3 Here are two model boats on a centimetre scale.

4   5   6   7   8   9   10   11   12   13   14

centimetres
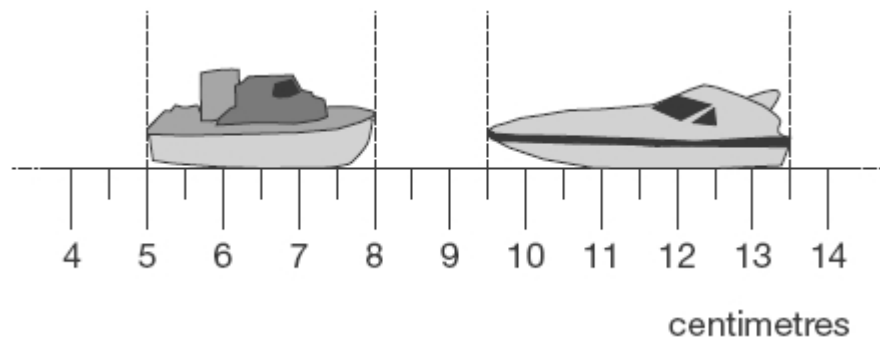
Actual size
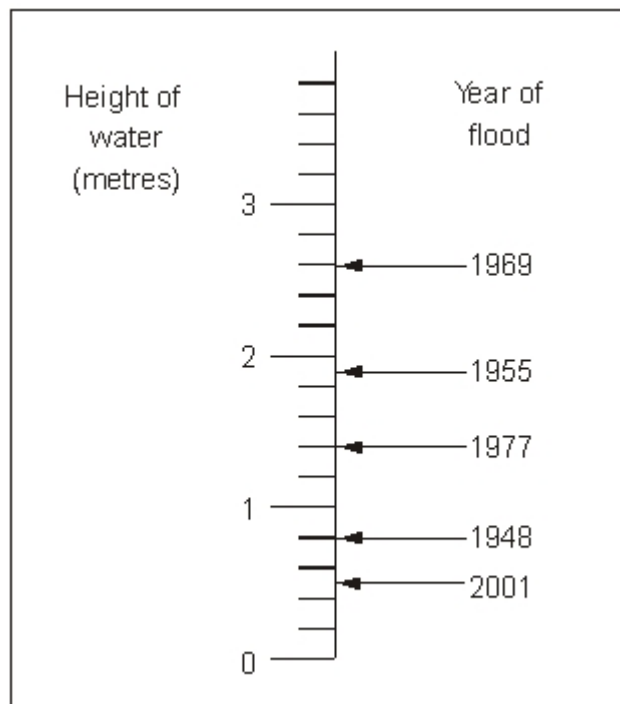
How far apart are the boats?

cm

1 mark

What is the **difference** in the lengths of the two boats?

cm

1 mark

4 This scale shows the dates of floods and the height of the water in the floods.

How high was the water in the 1955 flood?

m

1 mark

How much higher was the water in the 1969 flood than in the 1948 flood?

m

1 mark

5

Liam has two different sizes of rectangle.

45cm   20cm

He makes this pattern with them.

A

B

Not actual size

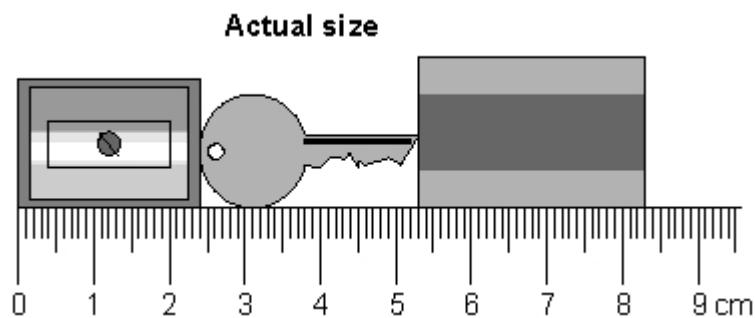Calculate the lengths of **A** and **B**.

A =   cm

1 mark

B =   cm

1 mark

6

Here are a pencil sharpener, a key and a rubber.

Actual size

0   1   2   3   4   5   6   7   8   9 cm

What is the length of **all three things** together?

Give your answer in **millimetres.**

mm

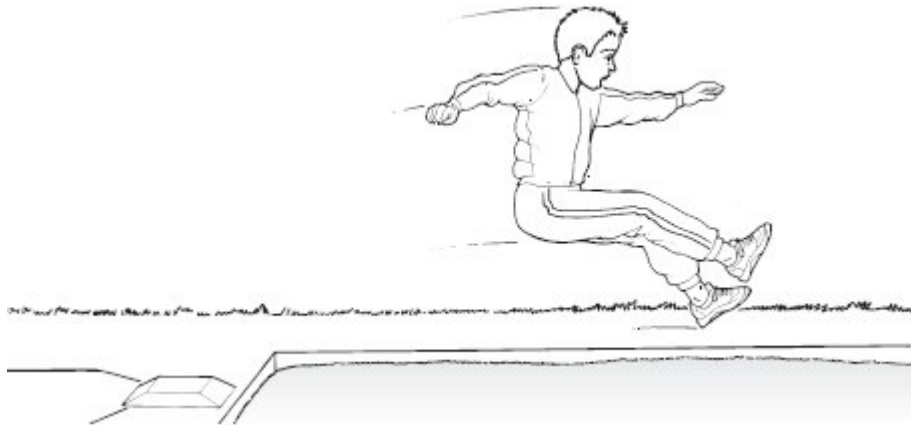1 mark

What is the length of the **key**?

Give your answer in **millimetres**.

mm

1 mark

7 Max jumped **2.25 metres** on his **second** try at the long jump.

This was **75 centimetres** longer than on his **first** try.

How far **in metres** did he jump on his **first** try?

m

1 mark

8 **Two** of these sentences could be true.

Tick (✓) the **two** sentences that could be true.

Adam's pencil is **12 centimetres** long.

Leah is **12 metres** tall.

Jake's glass holds **12 litres** of milk.
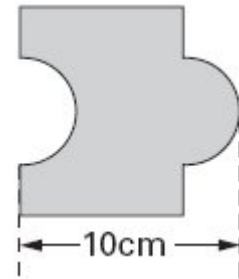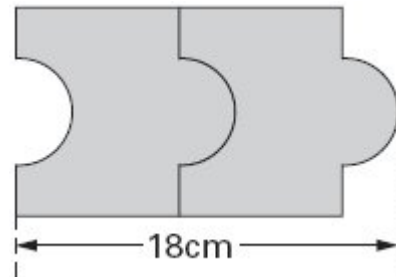
Kate's younger sister weighs **12 kilograms**.

1 mark

9 Josh has some tiles.

Not actual size

Each tile is 10 cm long.

Two tiles fitted together are 18 cm long.
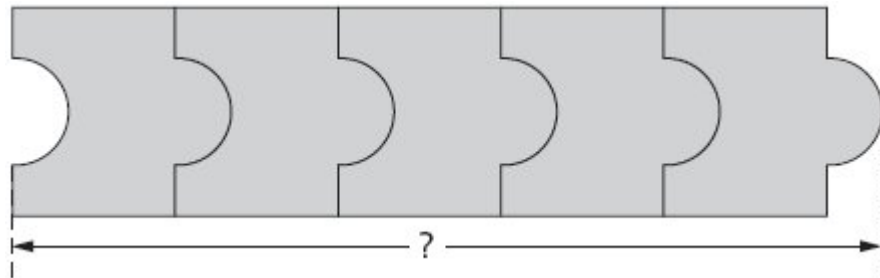
Calculate the length of **five** tiles fitted together.

Show your method

[cm   ]
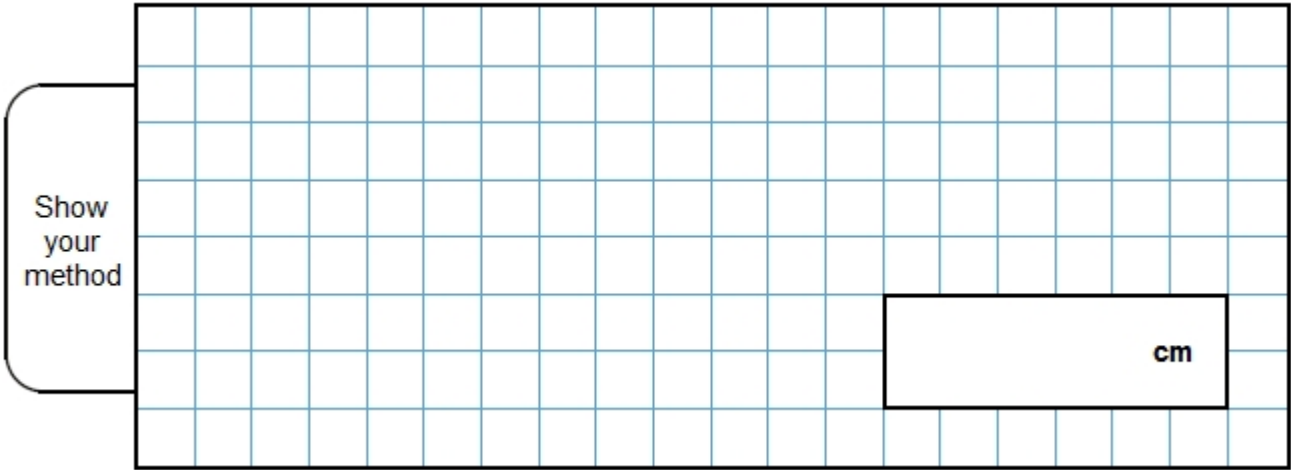
2 marks

10   This fence has three posts, equally spaced.

Not to scale

gap   gap

15cm   15cm   15cm

153 cm
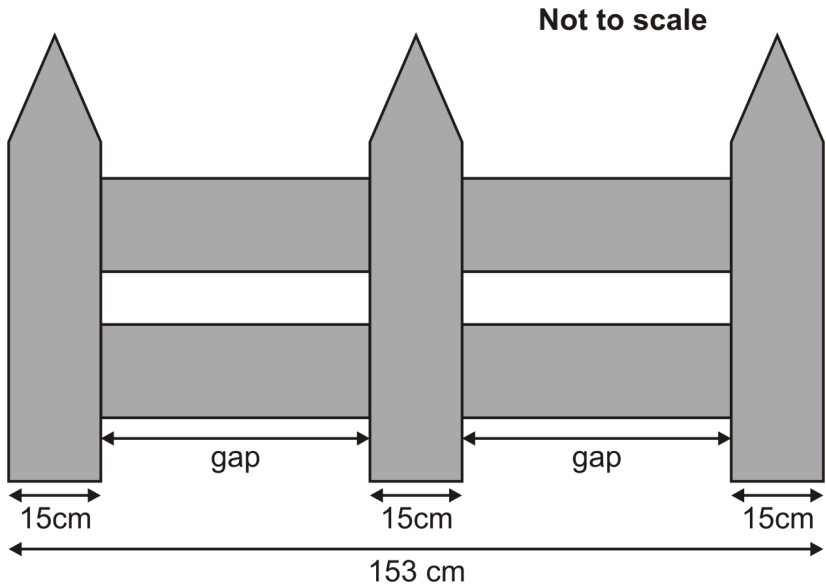
Each post is **15 centimetres** wide.

The length of the fence is **153 centimetres**.

Calculate the length of **one gap** between two posts.

Show your method

[cm   ]
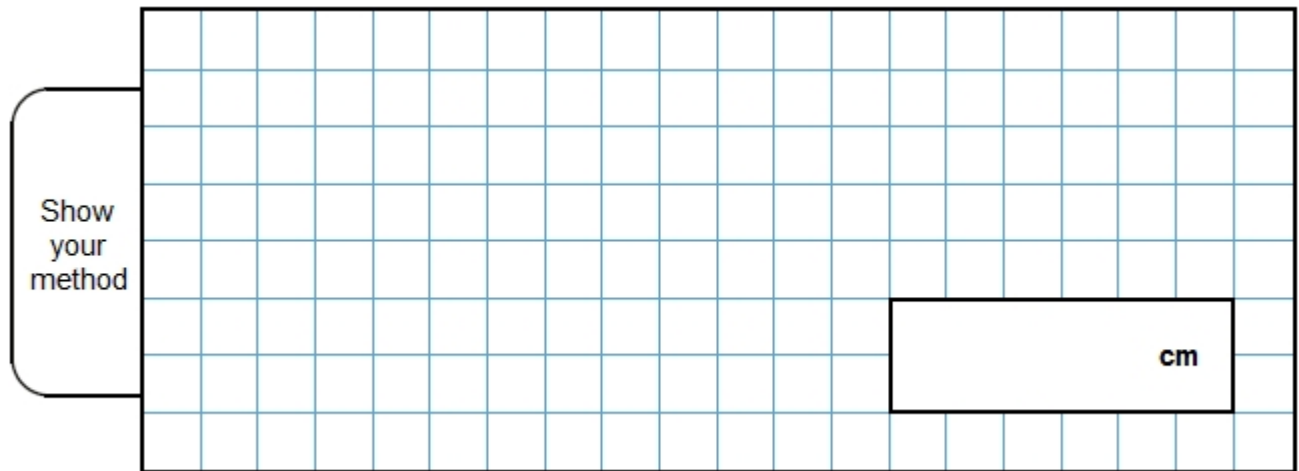
2 marks

11 Kate has a piece of ribbon **one metre** long.

She cuts off 30 centimetres.

How many centimetres of ribbon are left?

[cm   ]
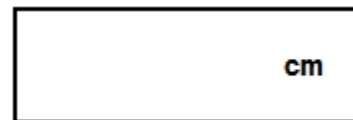
1 mark

12 Joe has two strips of card.

Each strip is 36 centimetres long.

One strip is divided into three equal parts.

The other strip is divided into four equal parts.

— 36cm —
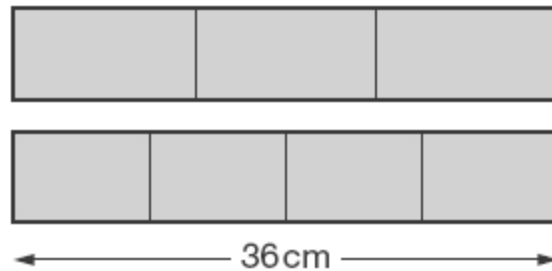
Not actual size

Joe uses the two strips to make this shape.

?
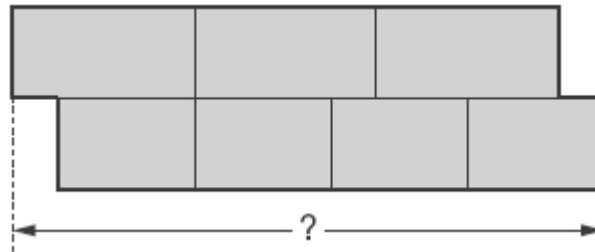
What is the total length of Joe's shape?

Show your method

cm

2 marks

Kirsty ran a race in one and a half minutes.

Mina took 10 seconds longer.

How many **seconds** did Mina take to run the race?

seconds

1 mark
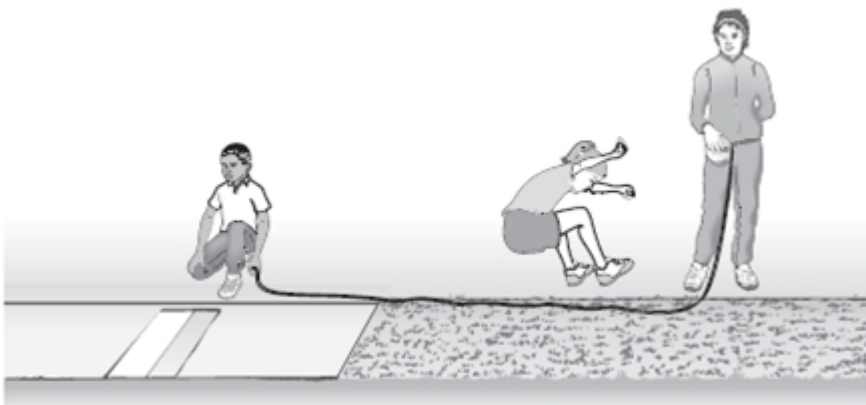
Seb made a jump of two and a half metres.

Kirsty's jump was 10 centimetres longer.

How long was Kirsty's jump?

1 mark

14 This scale shows length measurements in **centimetres** and **feet**.
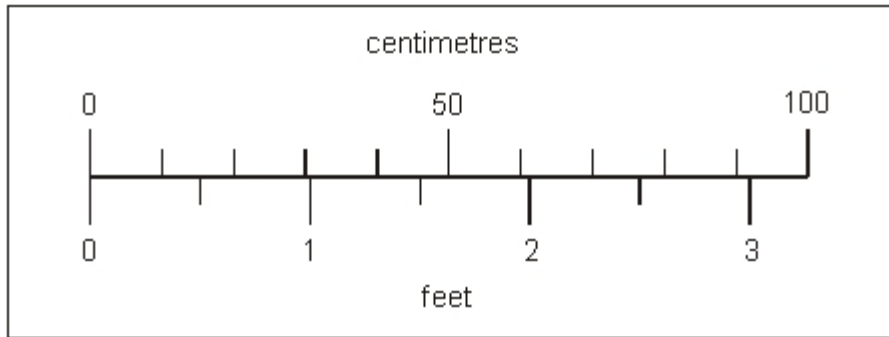
Not actual size

Look at the scale.

Estimate the number of centimetres that are equal to $2\frac{1}{2}$ feet.

cm

1 mark

Estimate the difference in centimetres between 50 cm and $1\frac{1}{2}$ feet.

cm

1 mark

15   A 5p coin has a diameter of 1.8 centimetres.

1.8 cm

Holly makes a straight line of 5p coins worth £10

£10

How long is Holly's line?
Give your answer in **metres**.

Show your method

_____ metres

2 marks

16 Freddie is half as tall as his mother.

Freddie is one metre shorter than his father.

Freddie's father is 180 centimetres tall.

How many centimetres tall is Freddie's mother?

	cm

1 mark

17 Jacob cuts **4** metres of ribbon into **three** pieces.

The length of the first piece is **1.28** metres.

The length of the second piece is **1.65** metres.

Work out the length of the third piece.

Show your method

	metres

2 marks

18 Circle the approximate measurement.

The length of a banana is about …

2 cm   20 cm   2 mm   2 m   20 m

The mass of an apple is about …

2 g   20 kg   200 kg   200 g   2 kg

A glass of fruit juice is about …

2 ml   2 l   20 ml   200 ml   20 l

2 marks

Mark schemes

1   Award **TWO** marks for the correct answer of 12.5

If the answer is incorrect, award **ONE** mark for evidence of an appropriate method, e.g.

- $250 \div 20$

OR

- 20 km is 1 cm
  100 km is 5 cm
  50 km is 2.5 cm
  5 cm + 5 cm + 2.5 cm

> *Answer need not be obtained for the award of **ONE** mark.*
>
> ***Do not** accept incorrect proportions in any step without evidence of the calculation performed.*

Up to 2m

[2]

2   Award **TWO** marks for the correct answer of 119.

If the answer is incorrect, award **ONE** mark for evidence of an appropriate method, e.g.

- $140 \div 20 = 7$
  $3 \times 7 = 21$
  $140 - 21$

OR

- $140 \div 20 = 7$
  $20 - 3 = 17$
  17×7

> *Answer need not be obtained for the award of **ONE** mark.*

Up to 2m

[2]

3   (a) $1\frac{1}{2}$ **OR** 1.5

1

(b)   1

1

[2]

4 (a) Answer in the range 1.85 to 1.95 exclusive.

1

(b) 1.8

1

[2]

5 (a) 5

1

(b) 15

If the answer is incorrect, award the mark if the answers to (a) and (b) total 20

U1

[2]

6 (a) 83 mm **OR** 8 cm 3 mm

Do not accept 8.3 mm

1

(b) 29 mm **OR** 2 cm 9 mm

Do not accept 2.9 mm

1

[2]

7 1.50 **OR** 1.5

Accept $1\frac{1}{2}$ m

Accept 150 cm

Do not accept 150 m

[1]

8 Two sentences ticked as shown:

Adam's pencil is **12 centimetres** long. ✔

Leah is **12 metres** tall. ☐

Jake's glass holds **12 litres** of milk. ☐

Kate's younger sister weights **12 kilograms**. ✔

Both answers must be ticked for the award of the mark.

Accept any other clear way of indicating the correct sentences, such as 'yes'.

[1]

9 Award **TWO** marks for the correct answer of 42

If the answer is incorrect, award **ONE** mark for evidence of appropriate working, eg

18 – 10 = 8

10 + (4 × 8) = wrong answer

OR

10, 18, 26, 34, wrong answer

*Calculation must be performed for the award of **ONE** mark.*

Up to 2

[2]

10 Award **TWO** marks for the correct answer of 54

If the answer is incorrect, award **ONE** mark for evidence of appropriate method, eg

- $153 - (3 \times 15) = 108$

- $108 \div 2$

*Answer need not be obtained for the award of **ONE** mark.*
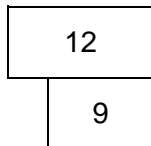
Up to 2 (U1)

[2]

11 70

[1]

12 Award **TWO** marks for the correct answer of 39

If the answer is incorrect, award **ONE** mark for evidence of appropriate working, eg:

- $36 \div 3 = 12$
  $36 \div 4 = 9$
  $12 + 9 + 9 + 9$ = wrong answer

OR

-

12

9

$12 - 9 = 3$
$36 + 3$ = wrong answer

*Accept for **ONE** mark an answer of 42 supported by appropriate working, eg*
$36 + 3 + 3$
*Working must be carried through to reach an answer for the award of **ONE** mark.*

Up to 2 (U1)

[2]

13 (a) 100 seconds

Answer must be in seconds.

Do not *accept 1 minute 40 seconds.*

1

(b) 260 cm **OR** 2.6 m

Accept 260 ***OR*** *2.6* ***OR*** *2 m 60 cm.*

1

[2]

14 (a) Answer in the range 76 cm to 78 cm inclusive.

1

(b) Answer in the range 3 cm to 5 cm inclusive.

1

[2]

15 Award TWO marks for the correct answer of 3.6

If the answer is incorrect, award **ONE** mark for evidence of an appropriate method, eg:

- $10 \div 0.05 = 200$
  $200 \times 1.8 = 360$
  $360 \div 100$

OR

- 20 5p coins make £1
  200 5p coins make £10
  200×0.018

Answer must be in metres for the award of ***TWO*** *marks.*

Accept for ***ONE*** *mark 360 centimetres.*

If the answer is incorrect, accept for ***ONE*** *mark an answer of 36 multiplied by any power of 10 with no evidence of an incorrect method.*

Answer need not be obtained for the award of ***ONE*** *mark.*

Up to 2

[2]

16 160

U1

[1]

17 Award **TWO** marks for the correct answer of 1.07.

If the answer is incorrect, award **ONE** mark for evidence of an appropriate method, e.g.

- 1.28 + 1.65 = 2.93
  4 – 2.93

OR

- 4 – 1.28 = 2.72
  2.72 – 1.65

OR

- 4 – 1.65 = 2.35
  2.35 – 1.28

> *Accept for **ONE** mark an answer of 107 metres as evidence of an appropriate method.*
>
> *Answer need not be obtained for the award of **ONE** mark.*

Up to 2m

[2]

18 Award **TWO** marks for all three values correct as shown:

<u>banana</u>

    2cm   (*20cm*)   *2mm*   *2m*   *20m*

<u>apple</u>

    2g   *20kg*   *200kg*   (*200g*)   *2kg*

<u>fruit juice</u>

    2ml   *2l*   *20ml*   (*200ml*)   *20l*

If the answer is incorrect, award **ONE** mark for two correct measurements.

> *Accept alternative unambiguous indications, eg correct value filled in.*

Up to 2m

[2]