R1/R2/R3 Converting Metrics

OCR

8   Liam is 0.83 metres tall.

R1   William is 1.31 metres tall.
     Jacob is taller than Liam by half the difference between Liam's height and William's height.

     How tall is Jacob?

     .... m **[3]**

8   Liam is 0.83 metres tall.
R1   William is 1.31 metres tall.
Jacob is taller than Liam by half the difference between Liam's height and William's height.

How tall is Jacob?

$$\begin{array}{r} 1.\overset{0\;2\;1}{\cancel{3\;1}} \\ -0.83 \\ \hline 0.48 \end{array}$$

William

Liam

difference = 0.48m

or

48cm

½ difference $\left(0.48m \right)$

$= 0.24m$

$$\text{Jacob} = \begin{array}{r} 0.83 \\ +0.24 \\ \hline 1.07 \end{array}$$ m   or 107cm

1.07 ....m **[3]**

9 (a) Convert 485 cm to metres.

(a) .... m**[1]**

(b) (i) Zara says

10 litres = 18 pints.

Use Zara's conversion to convert 25 litres into pints.

(b)(i) ....pints**[2]**

9 **(a)** Convert 485 cm to metres.

$$100 \text{cm} = 1\text{m}$$

(a) ...... 4.85 ...... m**[1]**

(b) **(i)** Zara says

10 litres = 18 pints.

Use Zara's conversion to convert 25 litres into pints.

$$\div 2 \left(\begin{array}{l} 10L = 18p \\ 5L = 9p \\ 25L = 45p \end{array} \right) \div 2 \\ \times 5 \qquad\qquad \times 5$$

(b)(i) ...... 45 ......pints**[2]**

Edexcel

7   Jaroslav puts some items into his rucksack.

The table shows the weight of each item.

Item	Weight
2 apples	120g each
2 bottles of water	524g each
camera	474g
map	86g
mobile phone	214g
umbrella	339g

The rucksack has a weight of 275 g.

Work out the total weight of the rucksack and all the items.
Give your answer in kilograms.

....kg

(Total for Question 7 is 3 marks)

7   Jaroslav puts some items into his rucksack.

The table shows the weight of each item.

Item	Weight
2 apples	120g each
2 bottles of water	524g each
camera	474g
map	86g
mobile phone	214g
umbrella	339g

240g
1048g
474g
86g
214g
339g

2676 g

1000g = 1 kg

The rucksack has a weight of 275 g.

275g

Work out the total weight of the rucksack and all the items.
Give your answer in kilograms.

2.676 .... kg

(Total for Question 7 is 3 marks)

11 Polly has a full 5 kg sack of rice.

She pours the rice from this sack into bags.
She fills as many bags as possible.

Each full bag contains 350 g of rice.

(a) How many bags did Polly fill from this sack of rice?

Polly assumes that the rice from two sacks will fill twice as many bags as the rice from one sack.

(b) Is Polly correct?

You must give a reason for your answer.

11 Polly has a full 5 kg sack of rice.

She pours the rice from this sack into bags.
She fills as many bags as possible.

Each full bag contains 350 g of rice.

(a) How many bags did Polly fill from this sack of rice?

$$5kg = \frac{5000 \text{ grams}}{350g} = 14.28$$

14 ✓

Polly assumes that the rice from two sacks will fill twice as many bags as the rice from one sack.

(b) Is Polly correct?

You must give a reason for your answer.

$$\frac{10000g}{350g} = 28.5\ldots = 28 \text{ bags}$$

Yes, double 14 is 28 ✓

2 Change 350 centimetres into metres.

.... metres

(Total for Question 2 is 1 mark)

2 Change 350 centimetres into metres.

100 cm = 1m

3.5 metres

(Total for Question 2 is 1 mark)

4   Change 7500 grams into kilograms.

R2

.... kilograms

(Total for Question 4 is 1 mark)

4 Change 7500 grams into kilograms.

R2

$1000g = 1kg$

7·5 .... kilograms

(Total for Question 4 is 1 mark)

3 Change 2.5 litres into millilitres.

R3

....millilitres

(Total for Question 3 is 1 mark)

3 Change 2.5 litres into millilitres.

R3

$1000ml = 1L$

2500 millilitres

(Total for Question 3 is 1 mark)

1 (a) Change 365 cm into metres.

.... m

(1)

(b) Change 2.7 kg into grams.

.... g

(1)

(Total for Question 1 is 2 marks)

1 (a) Change 365 cm into metres.

$$100cm = 1m$$

3.65 _____ m

(1)

(b) Change 2.7 kg into grams.

$$1000g = 1kg$$

2700 _____ g

(1)

(Total for Question 1 is 2 marks)

4 Ken buys some fruit.

He buys apples, bananas, peaches and oranges.
Ken buys

4 apples	weighing 125 g each
2 bananas	weighing 170 g each
3 peaches	weighing 135 g each

Each orange has a weight of 90 g.

The fruit has a total weight of 1.785 kg.

(a) Work out how many oranges Ken buys.

....

(3)

4   Ken buys some fruit.

He buys apples, bananas, peaches and oranges.
Ken buys

      4 apples ✗ weighing 125 g each   500g
      2 bananas   weighing 170 g each   340g
      3 peaches   weighing 135 g each   405g
                                                    1245g

Each orange has a weight of 90 g.

The fruit has a total weight of 1.785 kg.

(a) Work out how many oranges Ken buys.

$1785g - 1245$

$= 540g = $ Oranges

Oranges

$\dfrac{540g}{90g} = 6$ Oranges

6

(3)

21 Renee buys 5 kg of sweets to sell.
She pays £10 for the sweets.

R2

R6 Renee puts all the sweets into bags.
She puts 250 g of sweets into each bag.
She sells each bag of sweets for 65p.

Renee sells all the bags of sweets.

Work out her percentage profit.

....%

(Total for Question 21 is 4 marks)

Renee buys 5 kg of sweets to sell.
She pays £10 for the sweets.

R2

R6 Renee puts all the sweets into bags.
She puts 250 g of sweets into each bag.
She sells each bag of sweets for 65p.

Renee sells all the bags of sweets.

Work out her percentage profit.

$5 kg = 5000 g$

$250 g \nearrow \times 20$

20 bags of sweets @ 65p

$20 \times 65p = £13 \checkmark$

$\times 10 = 650p$
$\times 2 = 1300p$

Profit = £3

$\dfrac{diff}{original} = \dfrac{3}{10}$

30 ✓ %

(Total for Question   is 4 marks)

5 (a) Change 35 cm to mm.

R1

.... mm

(1)

(b) Change 7700 millilitres to litres.

R3

.... litres

(1)

(c) Change 0.32 kilograms to grams.

R2

.... grams

(1)

5 (a) Change 35 cm to mm.

R1

$$10mm = 1cm$$

350 _____ mm

(1)

(b) Change 7700 millilitres to litres.

R3

$$1000ml = 1 Litre$$

7.7 _____ litres

(1)

(c) Change 0.32 kilograms to grams.

R2

$$1000g = 1kg$$

320 _____ grams

(1)

3 (a) Change 4560 g into kg.

R2

....kg

(1)

(b) Change 7.3 m into mm.

R1

....mm

(1)

(Total for Question 3 is 2 marks)

3 (a) Change 4560 g into kg.

R2

$1000g = 1kg$

4.56 ....kg

(1)

(b) Change 7.3 m into mm.

R1

$100cm = 1m$

$7.3m = 730 cm$

7300 ....mm

(1)

(Total for Question 3 is 2 marks)

$10mm = 1cm$ $730cm = 7300$

7 Shaun is 1.88 m tall.

R1 David is 6 cm taller than Shaun.

How tall is David?

....

(Total for Question 7 is 2 marks)

7 Shaun is 1.88 m tall.

R1 David is 6 cm taller than Shaun.

How tall is David?

m   cm

Shaun   1.88m   188cm

David   0.06m   6cm   194cm ✓

1.94m or 194cm

(Total for Question 7 is 2 marks)

AQA

1 Which unit is most suitable for measuring the length of a tennis court?

R1 Circle your answer.

[1 mark]

kilometres　　　　metres　　　　centimetres　　　　millimetres

1 Which unit is most suitable for measuring the length of a tennis court?

R1 Circle your answer.

[1 mark]

kilometres   metres   centimetres   millimetres

4   What is a **litre** a unit of?

Circle your answer.

R3   **[1 mark]**

        area   density   mass   capacity

4   What is a **litre** a unit of?

Circle your answer.

R3   **[1 mark]**

area   density   mass   capacity

18   Circle the ratio which is the same as the scale   1 cm represents 1 km

[1 mark]

R1

R13

             1 : 100   1 : 1000   1 : 10 000   1 : 100 000

100000 cm

18   Circle the ratio which is the same as the scale   1 cm represents 1 km

[1 mark]

R1
R13

$1 : 100$ $1 : 1000$ $1 : 10\ 000$ $1 : 100\ 000$

$100cm = 1m$

$1km = 1000m$

$1000m = 100000cm$

25 The height of Zak is 1.86 metres.

The height of Fred is 1.6 metres.

R1

N33 Write the height of Zak as a fraction of the height of Fred.

Give your answer in its simplest form.

[3 marks]

Answer _____

25 The height of Zak is 1.86 metres.

The height of Fred is 1.6 metres.

R1

N33   Write the height of Zak as a fraction of the height of Fred.

Give your answer in its simplest form.

[3 marks]

$$\frac{Zak}{Fred} = \frac{1.86}{1.6} = \frac{186}{160}$$

$$= \frac{93}{80}$$

Answer _____ $\frac{93}{80}$ or $1\frac{13}{80}$ ✓

4   Circle the shortest length.

R1

1200 cm   0.13 km   110 m   140 000 mm

$100cm = 1m$

$1000m = 1Km$

4   Circle the shortest length.

m

[1 mark]

$10mm = 1cm$

R1

(1200 cm)   0.13 km   110 m   140 000 mm

$12m$ $130m$ $110m$ $14000\,cm$

$140m$

1   Add 8 mm to 7 cm

Circle your answer.

R1

[1 mark]

150 mm   1.5 cm   7.8 cm   708 mm

1   Add 8 mm to 7 cm

Circle your answer.

R1

[1 mark]

150 mm   1.5 cm   7.8 cm   708 mm

$$8\,mm$$
$$+\ 70\,mm$$
$$\overline{}$$
$$78\,mm$$

$$0.8\,cm$$
$$7.0\,cm$$
$$\overline{}$$
$$7.8\,cm$$