FOUNDATION

1.4 Metric Conversions: Test Pack

EDEXCEL 1MA1 · Calculator allowed · about 60 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 A shop sells bottles of juice. Each bottle holds 500 ml. Work out the total volume, in litres, of 10 bottles.

(Total for Question 1 is 3 marks)

2 Change 20000 m into km.

(Total for Question 2 is 2 marks)

3 Change 8.75 litres into ml.

(Total for Question 3 is 2 marks)

4 Aisha walks 0.7 km and then 663 m. Work out the total distance she walks, in km.

(Total for Question 4 is 3 marks)

© Revision Library | revisionlibrary.co.uk

5 Which is greater, 8.8 litres or 8827 ml? You must show how you decide. Then write down the difference in ml.

(Total for Question 5 is 3 marks)

---

6 A shop sells bottles of juice. Each bottle holds 330 ml. Work out the total volume, in litres, of 34 bottles.

(Total for Question 6 is 3 marks)

---

7 Convert 4800 millilitres to litres.

(Total for Question 7 is 1 mark)

---

8 Convert 74 millimetres to centimetres.

(Total for Question 8 is 1 mark)

---

9 A single vitamin tablet contains 0.09 grams of vitamin C. Write down this mass in milligrams.

(Total for Question 9 is 1 mark)

---

10 Convert 3.6 tonnes to kilograms.

(Total for Question 10 is 1 mark)

© Revision Library | revisionlibrary.co.uk

11 A ribbon is 0.85 metres long. Work out its length in centimetres.

(Total for Question 11 is 2 marks)

---

12 Freya converts 3.2 kilograms to grams. She writes: 3.2 kg = 32 g. Explain the mistake Freya has made, and write down the correct answer.

(Total for Question 12 is 2 marks)

---

13 Show that 2.5 tonnes is equivalent to 2 500 000 grams.

(Total for Question 13 is 2 marks)

---

14 A rectangular garden is 12 m long and 75 cm wide. Work out the area of the garden in m^2.

(Total for Question 14 is 3 marks)

---

15 A recipe needs 0.75 kg of flour. Flour is sold in 250 g packets. How many packets are needed?

(Total for Question 15 is 3 marks)

© Revision Library | revisionlibrary.co.uk

16 Convert 3.6 m^2 to cm^2.

(Total for Question 16 is 2 marks)

---

17 A paving slab measures 45 cm by 30 cm. How many such slabs are needed to cover an area of 5 m^2? Give your answer as the minimum whole number of slabs required.

(Total for Question 17 is 4 marks)

---

18 A cyclist rides at an average speed of 5 metres per second. Work out this speed in kilometres per hour.

(Total for Question 18 is 3 marks)

---

19 The density of a sample of packaging foam is 45 kilograms per cubic metre (45 kg/m^3). Work out this density in grams per cubic centimetre (g/cm^3).

(Total for Question 19 is 3 marks)

© Revision Library | revisionlibrary.co.uk

Mark scheme · 1.4 Metric Conversions: Test Pack

Question 1

500 x 10	**M1**
divides by 1000	**M1**
5 litres cao	**A1**

Answer: 5 litres

Question 2

divide by 1000	**M1**
20 km cao	**A1**

Answer: 20 km

Question 3

multiply by 1000	**M1**
8750 ml cao	**A1**

Answer: 8750 ml

Question 4

converts to the same unit	**M1**
adds the two distances	**M1**
1.363 km cao	**A1**

Answer: 1.363 km

Question 5

converts one quantity to the unit of the other	**M1**
8827 ml is greater	**A1**
27 ml	**B1**

Answer: 8827 ml is greater; difference 27 ml

Question 6

330 x 34	**M1**
divides by 1000	**M1**
11.22 litres cao	**A1**

Answer: 11.22 litres

Question 7

4.8 L or 4.8 litres cao	**B1**

Answer: 4.8 L

Question 8

7.4 cm cao	**B1**

Answer: 7.4 cm

Question 9

90 mg cao	**B1**

Answer: 90 mg

Question 10

3600 kg cao	**B1**

Answer: 3600 kg

Question 11

convert metres to centimetres, e.g. 0.85 x 100 or 0.85 -> 85	**M1**
85 cm cao	**A1**

Answer: 85 cm

Question 12

identifies that Freya multiplied by 10 instead of by 1000 (or divided by 100), oe	**B1**
3200 g cao	**B1**

Answer: Freya multiplied by 10 instead of 1000 (oe); the correct answer is 3200 g.

Question 13

convert tonnes to kg: 2.5 x 1000 = 2500 kg	**M1**
cso convert kg to g: 2500 x 1000 = 2 500 000 g, matching the given value	**A1**

Answer: 2 500 000 g (shown)

Question 14

convert width 75 cm to metres (0.75 m) or show equivalent	**M1**
calculate area 12 x 0.75	**M1**
9 m^2 cao	**A1**

Answer: 9 m^2

Question 15

convert 0.75 kg to grams (750 g) or equivalent	**M1**
divide 750 by 250 to find number of packets	**M1**
3 packets cao	**A1**

Answer: 3 packets

Question 16

recognise 1 m^2 = 10 000 cm^2 and multiply 3.6 x 10 000	**M1**
36 000 cm^2 cao	**A1**

Answer: 36 000 cm^2

Question 17

convert dimensions to metres: 45 cm = 0.45 m, 30 cm = 0.30 m	**M1**
calculate area of one slab 0.45 x 0.30 = 0.135 m^2	**M1**
divide required area by slab area: 5 / 0.135 = 37.037... (show division)	**M1**
38 slabs cao, with reason round up to whole slab	**A1**

Answer: 38 slabs (must round up from 37.037... to whole slabs)

Question 18

multiply by 3600 to find metres per hour: 5 x 3600	**M1**
18 000 (m per hour) oe	**M1**
18 km/h cao, dividing their metres-per-hour value by 1000	**A1**

Answer: 18 km/h (18 kilometres per hour)

Question 19

convert kg to g: 45 x 1000 = 45 000 (g)	**M1**
recognise 1 m^3 = 1 000 000 cm^3	**M1**
0.045 g/cm^3 cao, dividing 45 000 by 1 000 000	**A1**

Answer: 0.045 g/cm^3

© Revision Library | revisionlibrary.co.uk