

MIDDLE PRIMARY

Advance Maths

E-Booklet

Part 4





Problem Solving Part 1: Length & Mass

Middle Primary Advance Maths

Solve the following word problems.

1. Julie had 260 cm of ribbon. She bought another 140 cm of ribbon from the store and used all the ribbon to tie 4 similar Christmas presents. Each present used the same length of ribbon. What was the length of ribbon used to tie each present?

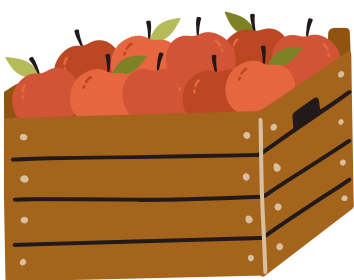


Do your workings below.

The length of ribbon used to tie each present was _____ cm.



2. A greengrocer had to sort out 2 cartons of apples. However, Carton A is 14 kg while Carton B is 10kg. What is the mass of apples he must transfer from Carton A to Carton B so that both cartons will have the same mass?



Do your workings below.

He must transfer _____ kg of apples from Carton A to Carton B.



Problem Solving Part 1: Length & Mass - Solutions

Middle Primary Advance Maths

Solve the following word problems.

1. Julie had 260 cm of ribbon. She bought another 140 cm of ribbon from the store and used all the ribbon to tie 4 similar Christmas presents. Each present used the same length of ribbon. What was the length of ribbon used to tie each present?



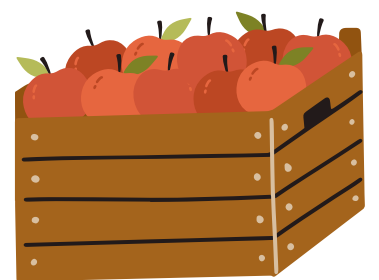
Do your workings below.

$$260 \text{ cm} + 140 \text{ cm} = 400 \text{ cm}$$

$$400 \div 4 \text{ presents} = 100 \text{ cm}$$

The length of ribbon used to tie each present was **100** cm.

2. A greengrocer had to sort out 2 cartons of apples. However, Carton A is 14 kg while Carton B is 10kg. What is the mass of apples he must transfer from Carton A to Carton B so that both cartons will have the same mass?



Do your workings below.

$$14 \text{ kg} + 10 \text{ kg} = 24 \text{ kg}$$

$$24 \text{ kg} \div 2 = 12 \text{ kg} \quad \text{Each parcel must weigh 12 kg.}$$

So, we must transfer 2 kg of apples from Carton A since it has 14 kg at first to Carton B. So, Carton B will have $10\text{kg} + 2\text{kg} = 12 \text{ kg}$

He must transfer **2** kg of apples from Carton A to Carton B.

Problem Solving Part 2: Length & Mass

Middle Primary Advance Maths

Solve the following word problems.



1. In a money box, there are 8 one- dollar coins.
Each coin has a mass of 5 g.
The total mass of the money box with the coins inside is 325g.
Find the mass of the empty money box.

Do your workings below.

Ans: _____ g

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2. Chelsea's dog, Teddy, ran around a square field twice.
Each side of the field has a length of 30m.
What is the total distance the dog ran?



Do your workings below.

Ans: _____ m



Problem Solving Part 2: Length & Mass - Solutions

Middle Primary Advance Maths

Solve the following word problems.



1. In a money box, there are 8 one- dollar coins.
Each coin has a mass of 5 g.
The total mass of the money box with the coins inside is 325g.
Find the mass of the empty money box.

Do your workings below.

$$\text{Total mass of the 8 coins} = 8 \times 5\text{g} = 40\text{g}$$

$$\text{Mass of coins and money box} = 325\text{g}$$

$$\text{Mass of empty money box} = 325 - 40 = \mathbf{285\text{g}}$$

Ans: **285** g

2. Chelsea's dog, Teddy, ran around a square field twice.
Each side of the field has a length of 30m.
What is the total distance the dog ran?



Do your workings below.

$$\text{Perimeter of 1 round} = 30 + 30 + 30 + 30 = 120\text{m}$$

$$\text{Teddy ran } 120 \text{ m for 1 round.}$$

$$\text{For 2 rounds, } 120 \times 2 = \mathbf{240\text{m}}$$

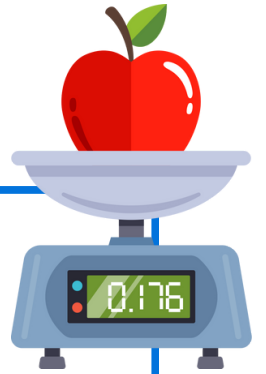
Ans: **240** m



Metric Units: Kilograms & Grams

Middle Primary Advance Maths

Convert the units.



1 kilogram (kg) = 1000 grams (g)

Convert kg to g :

$2\text{kg} \xrightarrow{\times 1000} 2000\text{ g}$

Add 3 zeros behind the 2kg to make 2000 g when you multiply with 1000.

Convert g to kg:

$3000\text{g} \xrightarrow{\div 1000} 3\text{kg}$

Convert from kilograms to grams.

1) $6\text{ kg} = \text{----- g}$ 2) $8\text{ kg} = \text{----- g}$

3) $4\text{ kg} = \text{----- g}$ 4) $2\text{ kg} = \text{----- g}$

5) $12\text{ kg} = \text{----- g}$ 6) $17\text{ kg} = \text{----- g}$

Convert from grams to kilograms.

1) $7000\text{g} = \text{----- kg}$ 2) $9000\text{g} = \text{----- kg}$

3) $13,000\text{g} = \text{----- kg}$ 4) $19,000\text{g} = \text{----- kg}$

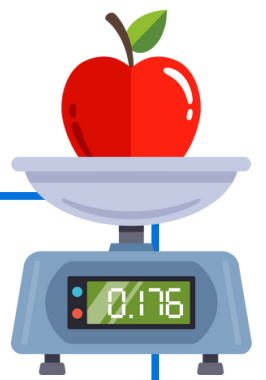
5) $30,000\text{g} = \text{----- kg}$ 6) $16,000\text{g} = \text{----- kg}$



Metric Units: Kilograms & Grams - Solutions

Middle Primary Advance Maths

Convert the units.



1 kilogram (kg) = 1000 grams (g)

Convert kg to g :

2kg $\xrightarrow{\times 1000}$ 2000 g

Add 3 zeros behind the 2kg to make 2000 g when you multiply with 1000.

Convert g to kg:

3000g $\xrightarrow{\div 1000}$ 3kg $\frac{3000}{1000}$

Convert from kilograms to grams.

1) 6 kg = 6000 g

2) 8 kg = 8000 g

3) 4 kg = 4000 g

4) 2 kg = 2000 g

5) 12 kg = 12,000 g

6) 17 kg = 17,000 g

Convert from grams to kilograms.

1) 7000g = 7 kg

2) 9000g = 9 kg

3) 13,000g = 13 kg

4) 19,000g = 19 kg

5) 30,000g = 30 kg

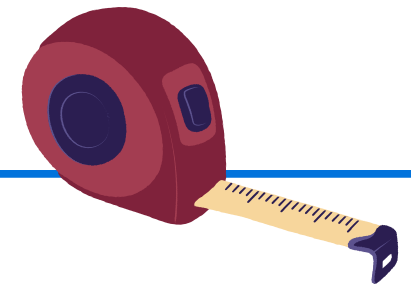
6) 16,000g = 16 kg



Metric Units: Centimetres & Metres

Middle Primary Advance Maths

Convert the units.



1 metre (m) = 100 centimetres (cm)

Convert m to cm:

2m $\times 100$  200cm

Add 2 zeros behind the 2m to make 200 cm when you multiply with 100.

Convert cm to m:

300 cm $\div 100$  3m $\frac{\cancel{300}}{\cancel{100}}$

Convert from metres to centimetres.

- 1) 4 m = _____ cm
- 2) 7 m = _____ cm
- 3) 6 m = _____ cm
- 4) 8 m = _____ cm
- 5) 5 m = _____ cm
- 6) 10 m = _____ cm

Convert from centimetres to metres.

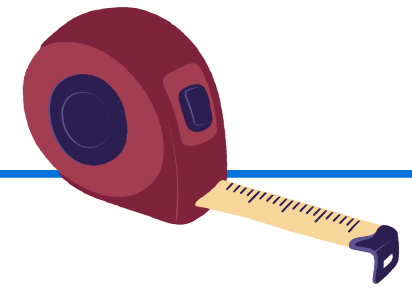
- 1) 400 cm = _____ m
- 2) 7000 cm = _____ m
- 3) 2000 cm = _____ m
- 4) 9000 cm = _____ m
- 5) 8000 cm = _____ m
- 6) 3000 cm = _____ m



Metric Units: Centimetres & Metres - Solutions

Middle Primary Advance Maths

Convert the units.



1 metre (m) = 100 centimetres (cm)

Convert m to cm:

2m $\xrightarrow{\times 100}$ 200cm

Add 2 zeros behind the 2m to make 200 cm when you multiply with 100.

Convert cm to m:

300 cm $\xrightarrow{\div 100}$ 3m $\frac{\cancel{300}}{\cancel{100}}$

Convert from metres to centimetres.

- 1) 4 m = 400 cm 2) 7 m = 700 cm
- 3) 6 m = 600 cm 4) 8 m = 800 cm
- 5) 5 m = 500 cm 6) 10 m = 1000 cm
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Convert from centimetres to metres.

- 1) 400 cm = 4 m 2) 7000 cm = 70 m
- 3) 2000 cm = 20 m 4) 9000 cm = 90 m
- 5) 8000 cm = 80 m 6) 3000 cm = 30 m