Calculate with Metric Measures

1a. A sign in the petrol station reads:
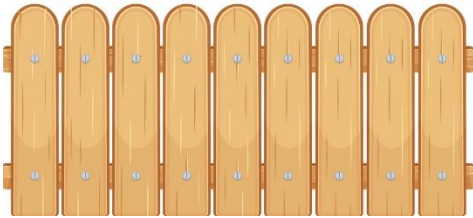
> Petrol: £1 per 1.8L
>
> Diesel: £1 for 1,650ml

How many more ml of petrol do you get per £1 than diesel?

PS

Calculate with Metric Measures

1b. A plank of wood is 30cm in width. The whole fence is 6m long.

How many planks are there in the fence?

PS

2a. Arrange the digit cards to make the following statement true.

$$\boxed{?}\ \boxed{8}\ \boxed{?}\ \text{cm} > \boxed{0}\ \boxed{.}\ \boxed{?}\ \text{m}$$

$$\boxed{8}\ \boxed{4}\ \boxed{9}$$

PS

2b. Arrange the digit cards to make the following statement true.

$$\boxed{0}\ \boxed{.}\ \boxed{?}\ \text{kg} < \boxed{?}\ \boxed{6}\ \boxed{?}\ \text{g}$$

$$\boxed{8}\ \boxed{0}\ \boxed{7}$$

PS

3a. A lift can hold up to 500kg. An average person weighs 70kg. Marcus says,

> Eight people can get in the lift together.

Is he correct? Explain your answer.

R

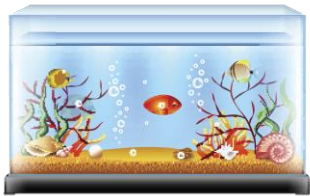**3b.** Twelve 1L bottles of water are delivered. It takes 6,250ml to fill the tank. Libby says,

> I will have 6L of water left.

Is she correct? Explain your answer.

R

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Calculate with Metric Measures

4a. A fish tank needs 3.75L of water to fill it. The tank has to be filled using a jug that holds $\frac{3}{4}$ of a litre.

How many jugs will it take to fill the tank?

E | PS

4b. There is a gap in the fence that is 275cm wide. This plank of wood is $\frac{1}{4}$ m wide.

How many planks of wood will fill the gap?

E | PS

5a. Arrange the digit cards to make the following statement true.

$$\boxed{0}\boxed{.}\boxed{?}_{kg} > \boxed{?}\boxed{0}\boxed{?}_{g}$$

$$\boxed{7}\quad\boxed{0}\quad\boxed{5}$$

E | PS

5b. Arrange the digit cards to make the following statement true.

$$\boxed{?}\boxed{.}\boxed{5}_{L} > \boxed{?}\boxed{5}\boxed{?}_{ml}$$

$$\boxed{5}\quad\boxed{4}\quad\boxed{7}$$

E | PS

6a. A piece a ribbon wrapped around a jar measures 10cm. Diana buys a length of ribbon and says,

> This length is 2.75m and will be long enough to wrap 30 jars.

Is she correct? Explain your answer.

E | R

6b. One battery weighs 12g. Filipo weighs a bag of batteries and says,

> A bag of batteries weighs 0.204kg. I must have 18 batteries.

Is he correct? Explain your answer.

E | R

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Reasoning and Problem Solving – Calculate with Metric Measures – Year 6 Expected

7a. Mum bought the wrong curtains. They are 208cm long, which is $\frac{3}{5}$ of a metre too short.

How long should the curtains have been in metres?

GD PS

7b. In January, a baby dragon weighed 3.5kg. By the end of February, it had gained 35% of that weight.

How heavy (in grams) was the baby dragon by the end of February?

GD PS

8a. Jayne has 3.85L of lemonade. Dom has 40% more than her. Show his measurement compared to Jayne's using the digit cards.

| 5 | ? | ? | 0 | ml | > | ? | . | 8 | ? | L |

| 3 | 9 | 5 |

GD PS

8b. The length of the football pitch is approximately 120m and is 5 times the length of a cricket pitch. Show the two lengths using the digit cards.

| ? | . | ? | 2 | km | > | ? | . | 0 | ? | ? | km |

| 0 | 1 | 2 | 4 |

GD PS

9a. Each child brings in a tin of food for the Harvest festival. A tin weighs 405g. There are 30 children in the class.
Jacob says,

> $\frac{2}{3}$ of the tins will weigh 8.1kg.

Is he correct? Explain your answer.

GD R

9b. Genevieve has 6 litres of milk and uses 2,250ml.
She says,

> We will still have $\frac{5}{8}$ of the milk for our breakfast tomorrow.

Is she correct? Explain your answer.

GD R

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Reasoning and Problem Solving – Calculate with Metric Measures – Year 6 Greater Depth