Reasoning and Problem Solving
Step 1: Compare Mass

National Curriculum Objectives:

Mathematics Year 2: (2M1) Compare and order lengths, mass, volume/capacity and record the results using >, < and =

Differentiation:

Questions 1, 4 and 7 (Reasoning)
Developing True or false. Compare the mass of 2 individual objects on a balance scale.
Expected True or false. Compare the mass of different objects on a balance scale, including multiple sets of each object.
Greater Depth True or false. Compare the mass of combinations of different objects, including multiple sets of each object.

Questions 2, 5 and 8 (Problem Solving)
Developing Use given 2 scales to compare the mass of two individual items not present on the same scale.
Expected Use 2 given scales to compare the mass of different objects, including multiple sets of each object, not present on the same scale.
Greater Depth Use 3 given scales to compare the mass of combinations of different objects, including multiple sets of each object not present on the same scale.

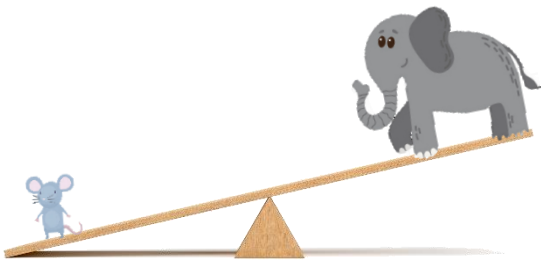
Questions 3, 6 and 9 (Reasoning)
Developing Consider and reason statements about given scales to compare the mass of two individual items. Statements use language of mass comparison.
Expected Consider and reason statements about given scales to compare the mass of different objects, including multiple sets of each object. Statements use symbols of comparison.
Greater Depth Consider and reason statements about given scales to compare the mass of combinations of different objects, including multiple sets of each object. Statements use symbols of mass comparison.

More Year 2 Mass, Capacity and Temperature resources.

Did you like this resource? Don't forget to review it on our website.

Compare Mass

1a. True or false?



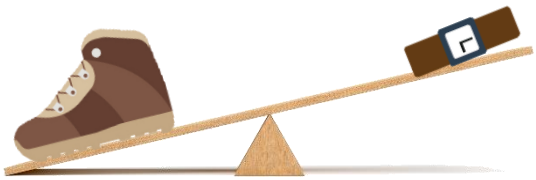
Explain your answer.

D

R

Compare Mass

1b. True or false?



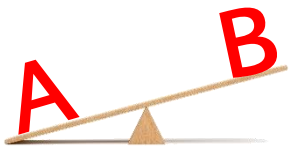
Explain your answer.

D

R

2a. Look at the scales below.

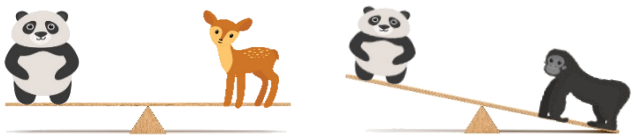
Use one animal from each scale above to make the scale below correct. Which animal can replace each letter?



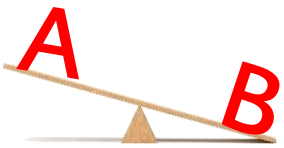
D

PS

2b. Look at the scales below.



Use one animal from each scale above to make the scale below correct. Which animal can replace each letter?



D

PS

3a. Cherry looks at the animals on the scales above. She writes,

> The heaviest animal is the hippo and the rabbit is the lightest.

Is she correct? Explain your answer.

D

R

3b. Dominic looks at the animals on the scales above. He writes,

> The panda and the deer weigh an equal amount.

Is he correct? Explain your answer.

D

R

Compare Mass

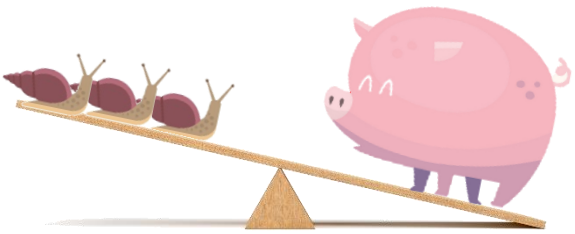
4a. True or false?

Explain your answer.

E R

Compare Mass

4b. True or false?

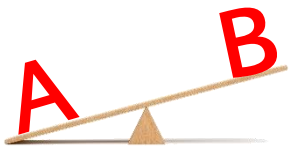


Explain your answer.

E R

5a. Look at the scales below.

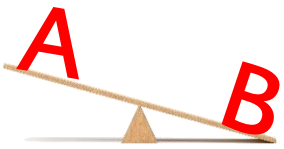
Use one fruit from each scale above to make the scale below correct. Which fruit can replace each letter?



E PS

5b. Look at the scales below.

Use one fruit from each scale above to make the scale below correct. Which fruit can replace each letter?



E PS

6a. Simon looks at the fruit on the scales above. He writes,

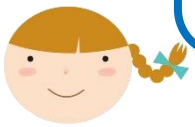
> The mass of two strawberries < the mass of the pear.

Is he correct? Explain your answer.

E R

6b. Jenny looks at the fruit on the scales. She writes,

> The mass of the tomatoes > the mass of the oranges.



Is she correct? Explain your answer.

E R

Compare Mass

7a. True or false?

Explain your answer.

R

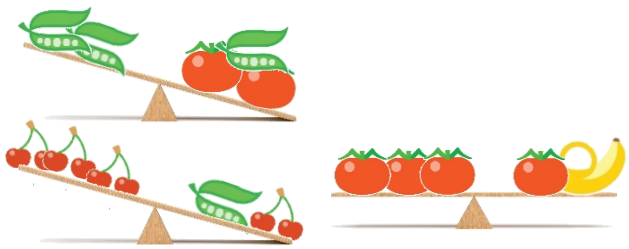
Compare Mass

7b. True or false?

Explain your answer.

R

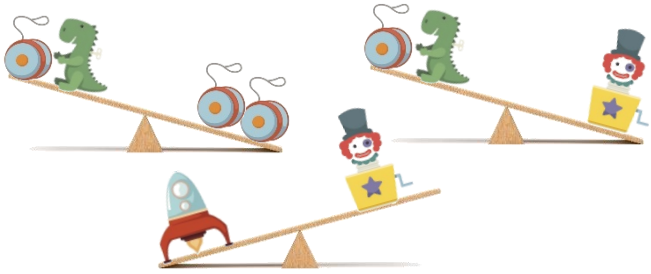
8a. Look at the scales below.



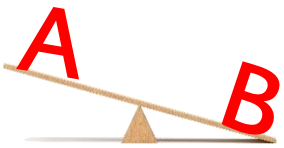
Use two items from the scales above to make the scale below correct. Which item can replace each letter?

PS

8b. Look at the scales below.



Use two toys from the scales above to make the scale below correct. Which toy can replace each letter?



PS

9a. Janey looks at the fruit on the scales above. She writes,

> The mass of 3 pea pods < the mass of 3 tomatoes

Is she correct? Explain your answer.

R

9b. Dan looks at the toys on the scales above. He writes,

> The mass of a jack in a box > the mass of two yo yos but < the mass of a rocket

Is he correct? Explain your answer.

R

Reasoning and Problem Solving
Compare Mass

Developing

1a. False. The scale shows a mouse is heavier than an elephant but an elephant would be heavier than a mouse.

2a. A: Hippo; B: Frog

3a. Cherry is correct that the hippo is the heaviest, but the frog is lighter than the rabbit so the frog is the lightest.

Expected

4a. False. The scales show the hamsters are is heavier than the dog and that is unlikely in a larger dog. The scales should be tipped the other way to show the dog is heavier.

5a. A: Pumpkin; B: Strawberry

6a. Simon is correct, the strawberries are lighter than the pear.

Greater Depth

7a. False. The pencils and the calculator would most likely be heavier than the plastic protractor, so the scale should tip down towards the left.

8a. Various possible answers, for example: A: Banana; B: peapod

9a. Janey is correct. The scales show two pea pods are lighter than two tomatoes, so three pea pods would be lighter than three tomatoes.

Reasoning and Problem Solving
Compare Mass

Developing

1b. True. The scale shows the boot is heavier than the watch as it is lower on the scale.

2b. A: Deer; B: Gorilla

3b. Dominic is correct, the scales are balanced so they must be equal in weight.

Expected

4b. True. The scales show the pig is heavier and it is likely this would be the case as the snails are small and the pig is very large.

5b. A: Tomato; B: Lemon

6b. Jenny has used the wrong symbol. She has written that the tomatoes weighs more than the oranges. The scales show that the tomatoes are lighter than the oranges. She should have written the tomatoes < the oranges.

Greater Depth

7b. False. The scales show the bottles of glue are heavier than a rucksack full of items, which is unlikely to be the case.

8b. Various possible answers, for example: A: Dinosaur; B: rocket

9b. Dan can't be sure that the jack in a box is heavier than 2 yo yos, but we know it is heavier than one yo yo and a dinosaur. He is correct that the jack in a box is lighter than a rocket.