Answers - Length, mass and capacity

Year: Year 1

Answer to Question 1

a. Count the cubes in each bar: A has 5, B has 9 and C has 3. The biggest number is 9, so **bar B** is the longest.
b. The smallest number of cubes is 3, so **bar C** is the shortest.
c. Order the numbers from smallest to biggest: 3, 5, 9. So the order is **C, A, B**.
d. Bar B has 9 cubes and bar A has 5. Count on from 5 to 9: 6, 7, 8, 9. That is 4 steps, so B is **4 cubes** longer.

Answer to Question 2

a. The bar starts at 0 on the ruler and its end lines up with the 4 mark. So the bar is **4 cm** long.
b. The bar starts at 0 and ends exactly at the 9 mark, so it is **9 cm** long.
c. The bar starts at 0 and ends at the 6 mark, so it is **6 cm** long. Always check that the bar starts at 0 before you read the end.

Answer to Question 3

a. The bag side is down. The **bag** is heavier.
b. The cat side is down. The **cat** is heavier.
c. The book side is down. The **book** is heavier. The cube is lighter.

Answer to Question 4

a. Both pans are at the same height and the beam is flat, so the scales are **level**.
b. Level scales mean both sides push down the same amount. So the ball and the block have **the same mass**.
c. One more cube makes the ball side heavier than the block side. The heavier side goes down, so the **ball side** goes down.

Answer to Question 5

a. Look for the container with water right up to the top: **the first one** is full.
b. The water in the second container comes up to the middle, so **the second one** is half full.
c. The third container has no water in it at all, so **the third one** is empty.

d. The full container has more water than the half-full one, and the empty one has none. So **the first one** holds the most water now.

Answer to Question 6

a. An elephant is much harder to lift than a mouse, so an elephant is **heavier** than a mouse.
b. A pencil fits in your hand but a bus is as long as many cars, so a pencil is **shorter** than a bus.
c. A feather floats in the air and a brick is hard to carry, so a feather is **lighter** than a brick.
d. A giraffe can reach the leaves at the top of a tree, so a giraffe has a **longer** neck than a rabbit.

Answer to Question 7

a. 14 is more than 9. The rope is **longer**. 14 − 9 = 5 cm.
b. 12 is less than 17. The box is **lighter**. 17 − 12 = 5 cubes.
c. 6 is less than 10. The cup holds **less** than the mug.
d. 10 − 6 = **4** spoons more.

Answer to Question 8

a. Compare the heights 12 cm, 18 cm and 9 cm. 18 is the biggest number, so **sunflower B** is the tallest.
b. 9 is the smallest number, so **sunflower C** is the shortest.
c. Find the difference between 18 and 12. Count on from 12: 13, 14, 15, 16, 17, 18. B is **6 cm** taller than A.
d. Find the difference between 12 and 9. Count on from 9: 10, 11, 12. C is **3 cm** shorter than A.

Answer to Question 9

a. **9 cm** (read from the ruler).
b. 9 + 7 = **16 cm**.
c. 16 is less than 20. **No**, it is too short.
d. 20 − 16 = **4 cm** more.

Answer to Question 10

a. 20 is more than 15, so the **flour**.

b. 20 − 15 = **5** cubes heavier.
c. 20 + 15 = **35** cubes.
d. 10 is less than 15. **Yes**, the butter is lighter than the sugar.

Answer to Question 11

a. **8** buckets.
b. 12 − 8 = **4** buckets.
c. Half of 12 is 6. He has put in 8, which is more than 6. **Yes**, it is more than half full.
d. Half of 12 is **6** big buckets.

Answer to Question 12

a. 9 is biggest, so the **oranges**.
b. 5 is smallest, so the **pears**.
c. 7 + 9 + 5 = **21** cubes.
d. 9 + 7 = 16, and 16 is more than 15. **Yes**, it is true.

Answer to Question 13

a. Each small cup holds 2 spoons. Count in 2s for 3 cups: 2, 4, 6. That makes **6** spoons.
b. Each big cup holds 5 spoons. Two big cups hold 5 + 5 = **10** spoons.
c. Compare 10 and 6. 10 is bigger, so **2 big cups** hold more juice than 3 small cups.
d. Count on from 6 to 10: 7, 8, 9, 10. That is **4** spoons more.

Answer to Question 14

a. Rope A is 10 cm longer than rope B, so add: 20 + 10 = **30 cm**.
b. Rope C is 5 cm shorter than rope B, so subtract: 20 − 5 = **15 cm**.
c. Compare 30 cm, 20 cm and 15 cm. The biggest length is 30 cm, so **rope A** is the longest.
d. Put the lengths from smallest to biggest: 15 cm, 20 cm, 30 cm. The order is **C, B, A**.

Answer to Question 15

a. 12 is the biggest. **Bea**.
b. 6 is the smallest. **Cara**.
c. **Bea (12), Dev (10), Ali (8), Cara (6)**.
d. 6 + 5 = 11. 11 is less than 12, so **no**. It is the second tallest.

e. 8 + 12 + 6 + 10 = **36** cubes.

Answer to Question 16

a. The pencils must start at the same line. If not, it is **not a fair test**.
b. Put both pencils with the ends at the same line, or measure each with a ruler from 0.
c. 13 is more than 12, so **Mia's** pencil is longer.
d. 13 − 12 = **1 cm** longer.

Answer to Question 17

a. **Ball (4), toy car (6), shoe (9), book (15)**.
b. 6 + 9 = 15. The **toy car and the shoe**.
c. 15 − 9 = **6** cubes heavier.
d. 6 + 4 = 10. 10 is more than 9, so **yes**.

Answer to Question 18

a. 15 is more than 8. The **big** tank.
b. 15 − 8 = **7** jugs more.
c. Double 8 is 16, and 15 is just 1 less than 16. **Yes**, it is nearly double.
d. Half of 8 is **4** jugs.

Answer to Question 19

a. 10 and 10 are the same length, so **no**.
b. 12 − 8 = 4, and 8 + 12 = 20. **Yes**.
c. The pieces are **8 cm and 12 cm**.
d. 8 + 12 = **20 cm**. Correct.

Answer to Question 20

a. 2 apples are left on the left side.
b. 1 apple and 5 cubes (8 − 3 = 5) are left on the right side.
c. 1 apple is left on the left. 5 cubes are left on the right.
d. 1 apple weighs the same as **5 cubes**.