Worksheet - Length, mass and capacity

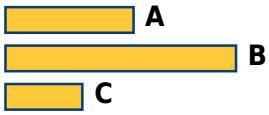
Year: Year 1 · 20

Show your working.

Question 1

Question 1 – Longest and shortest *(Section A · Practice)*

Look at the three bars A, B and C.



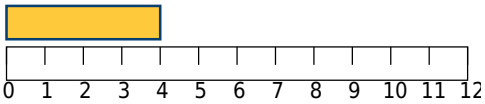
a. Which bar is the longest?
b. Which bar is the shortest?
c. Put the bars in order, shortest first.
d. How many cubes longer is bar B than bar A?

Question 2

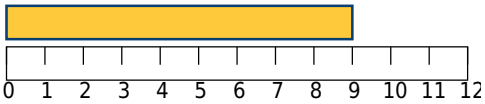
Question 2 – Use the ruler *(Section A · Practice)*

Read the length of each bar from the ruler.

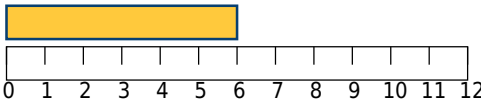
a.



b.



c.



Question 3

Question 3 – Heavier or lighter *(Section A · Practice)*

Look at the balance scales. Say which thing is heavier.

a.



b.



c.



Question 4

Question 4 – Same or different? *(Section A · Practice)*

Look at the balance scales.

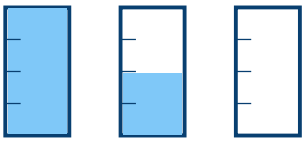


a. Are the scales level or tipped?
b. What does that tell you about the ball and the block?
c. If you add one more cube to the ball side, which side goes down?

Question 5

Question 5 – Full, half full, empty *(Section A · Practice)*

Look at the containers.



a. Which container is full?
b. Which container is half full?
c. Which container is empty?
d. Which holds the most water now?

Question 6

Question 6 – Choose the best word *(Section A · Practice)*

Choose the best word for each sentence: longer, shorter, heavier, lighter.

a. An elephant is ____ than a mouse.
b. A pencil is ____ than a bus.

c. A feather is ____ than a brick.
d. A giraffe is taller and has a ____ neck than a rabbit.

Question 7

Question 7 – Compare with numbers *(Section A · Practice)*

Write longer, shorter, heavier or lighter, and work out the difference.

a. A rope is 14 cm and a string is 9 cm. The rope is ____ than the string.
b. A box is 12 cubes in mass and a bag is 17 cubes in mass. The box is ____ than the bag.
c. A cup holds 6 spoons and a mug holds 10 spoons. The cup holds ____ than the mug.
d. How much more does the mug hold than the cup?

Question 8

Question 8 – Plants in the garden *(Section B · Real-life practice)*

Anna measures three sunflowers in the school garden. Sunflower A is 12 cm tall. Sunflower B is 18 cm tall. Sunflower C is 9 cm tall.

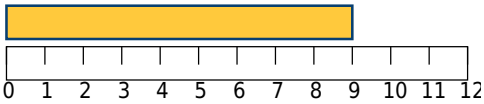
Sunflower	Height
A	12 cm
B	18 cm
C	9 cm

a. Which sunflower is the tallest?
b. Which sunflower is the shortest?
c. How much taller is B than A?
d. How much shorter is C than A?

Question 9

Question 9 – Making a necklace *(Section B · Real-life practice)*

Ria makes a necklace with beads. The red part is 9 cm long. The blue part is 7 cm long.

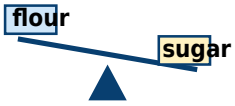


a. How long is the red part?
b. What is the total length of the necklace? Add 9 + 7.
c. Ria's neck needs a necklace that is 20 cm long. Is hers long enough?
d. How many more centimetres does she need?

Question 10

Question 10 – Baking a cake *(Section B · Real-life practice)*

Mum bakes a cake. She puts a bag of flour on one side of the balance and cubes on the other side. The flour is the same as 20 cubes. A bag of sugar is the same as 15 cubes.



a. Which is heavier, the flour or the sugar?
b. How many cubes heavier is the flour?
c. Mum adds both bags together. How many cubes is that?
d. The butter is 10 cubes. Is the butter lighter than the sugar?

Question 11

Question 11 – Filling the paddling pool *(Section B · Real-life practice)*

At the park, Ben fills a paddling pool with a small bucket. The pool holds 12 buckets of water. He has put in 8 buckets already.

a. How many buckets has Ben put in?
b. How many more buckets does he need to fill the pool?
c. Is the pool half full yet? Half of 12 is 6.
d. The big bucket holds twice as much as the small bucket. How many big buckets fill the pool?

Question 12

Question 12 – At the shop *(Section B · Real-life practice)*

Mia is at the shop. She buys a bag of apples that weighs the same as 7 cubes, a bag of oranges that weighs the same as 9 cubes, and a bag of pears that weighs the same as 5 cubes.

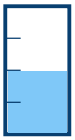
Fruit	Mass (cubes)
Apples	7
Oranges	9
Pears	5

a. Which bag is the heaviest?
b. Which bag is the lightest?
c. How many cubes do all three bags weigh together?
d. The oranges and the apples together are heavier than 15 cubes. Is that true?

Question 13

Question 13 – Cups of juice *(Section B · Real-life practice)*

At a party, Dan pours juice. A small cup holds 2 spoons of juice and a big cup holds 5 spoons. He fills 3 small cups.



a. How many spoons are in 3 small cups? Count in 2s.
b. How many spoons are in 2 big cups?
c. Which is more, 3 small cups or 2 big cups?
d. How many spoons more?

Question 14

Question 14 – The school playground *(Section B · Real-life practice)*

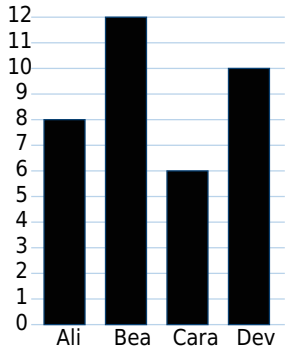
Children skip in the playground. Skipping rope A is 10 cm longer than rope B. Rope B is 20 cm long.

a. How long is rope A?
b. Rope C is 5 cm shorter than rope B. How long is rope C?
c. Which rope is the longest?
d. Put the three ropes in order, shortest first.

Question 15

Question 15 – The tallest tower *(Section C · Problem solving)*

Four children build towers of cubes. Ali builds a tower with 8 cubes. Bea builds a tower with 12 cubes. Cara builds a tower with 6 cubes. Dev builds a tower with 10 cubes.



a. Whose tower is the tallest?
b. Whose tower is the shortest?
c. Put the towers in order, tallest first.
d. Cara adds 5 cubes to her tower. Is hers now the tallest? Explain.

e. How many cubes do all four towers have?

Question 16

Question 16 – Fair or not fair? *(Section C · Problem solving)*

Leo says "My pencil is longer than yours." The two pencils are put on the table. Leo's pencil starts further to the left than Mia's pencil. They both look 12 cm long. Mia says "That is not fair."

a. Why does Mia say it is not fair?
b. How can they check the lengths fairly?
c. Mia measures her pencil with a ruler and gets 13 cm. Leo measures his and gets 12 cm. Whose pencil is longer?
d. How much longer?

Question 17

Question 17 – Heavy or light? *(Section C · Problem solving)*

Alex tests which things float and which things are heavy. He compares items using cubes on a balance. A book is 15 cubes, a toy car is 6 cubes, a shoe is 9 cubes and a ball is 4 cubes.

Item	Mass (cubes)
Book	15
Toy car	6
Shoe	9
Ball	4

a. Put the items in order, lightest first.
b. Which two items together weigh the same as the book?
c. How many cubes heavier is the book than the shoe?
d. Is the toy car and the ball together heavier than the shoe? Explain.

Question 18

Question 18 – Water in the tank *(Section C · Problem solving)*

A small fish tank holds 8 jugs of water. A big tank holds 15 jugs of water. The shopkeeper says "The big tank holds nearly double." Check what he says.

a. Which tank holds more water?
b. How many jugs more?
c. Double 8 is 16. Is the shopkeeper right? Explain.
d. The shopkeeper fills the small tank to half full. How many jugs is that?

Question 19

Question 19 – Challenge: the ribbon *(Section D · Challenge)*

Hana has a ribbon that is 20 cm long. She cuts it into two pieces. One piece is 4 cm longer than the other.

a. Try 10 cm and 10 cm. Is one piece 4 cm longer?
b. Try 8 cm and 12 cm. Is one piece 4 cm longer?
c. What are the lengths of the two pieces?
d. Check: do the two pieces add to 20 cm?

Question 20

Question 20 – Challenge: balancing *(Section D · Challenge)*

A scale is level when the left side has 2 apples and 3 cubes. The right side has 1 apple and 8 cubes. All apples have the same mass.

a. Take 3 cubes off each side. What is left on the left side?
b. What is left on the right side?
c. Take 1 apple off each side. What is left on each side?
d. How many cubes is 1 apple?