

Reasoning and Problem Solving

Step 2: Measure Length (cm)

National Curriculum Objectives:

Mathematics Year 2: (2M2) [Choose and use appropriate standard units to estimate and measure length/height in any direction \(m/cm\); mass \(kg/g\); temperature \(\$^{\circ}\$ C\); capacity \(litres/ml\) to the nearest appropriate unit using rulers, scales, thermometers and measuring vessels](#)

Differentiation:

Questions 1, 4 and 7 (Reasoning)

Developing Explain why an object is the odd one out. Measure objects using ruler; always starting at 0; all units shown on the ruler.

Expected Explain why an object is the odd one out. Measure objects using ruler; not always starting at 0; all units shown on the ruler.

Greater Depth Explain why an object is the odd one out. Measure objects using ruler; not aligned with 0; some increments missing.

Questions 2, 5 and 8 (Reasoning)

Developing Explain which child is correct when measuring an object. Measure objects using ruler; always starting at 0; all units shown on the ruler.

Expected Explain which child is correct when measuring an object. Measure objects using ruler; not always starting at 0; all units shown on the ruler.

Greater Depth Explain which child is correct when measuring an object. Measure objects using ruler; not aligned with 0; some increments missing.

Questions 3, 6 and 9 (Problem Solving)

Developing Find two possible measurements between two lengths. Measurements are smaller than 10cm.

Expected Find a range of possibilities between two lengths. Measurements are up to 15cm.

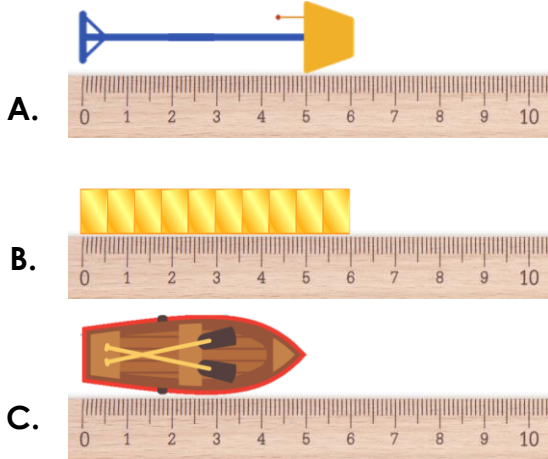
Greater Depth Find a range of possibilities between two lengths. Using a clue to limit possibilities.

More [Year 1 and Year 2 Length and Height](#) resources.

Did you like this resource? Don't forget to [review](#) it on our website.

Measure Length (cm)

1a. Which is the odd one out?



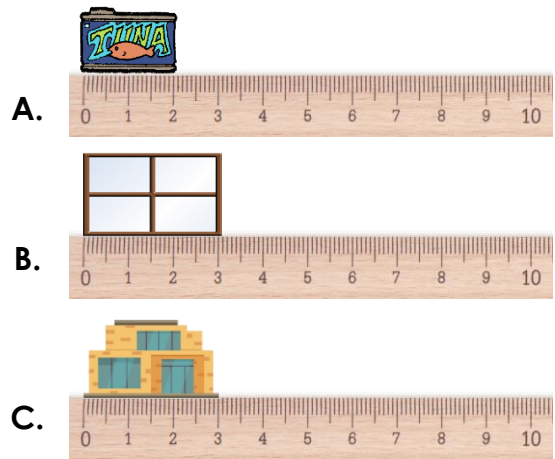
Explain your answer.



2 R

Measure Length (cm)

1b. Which is the odd one out?



Explain your answer.



2 R

2a. Nadia and Alex are measuring the length of a toy flag pole.



Nadia says,



The pole is 8cm long.

Alex says,



The pole is 7cm long.

Who is correct? Explain your answer.



2 R

2b. Martin and Harriet are measuring the length of a shelf in a dolls house.



Martin says,



This shelf is 7cm long.

Harriet says,



This shelf is 9cm long.

Who is correct? Explain your answer.



2 R

3a. David's toy bus measures between 4cm and 9cm.

Find two possible measurements for his toy bus.



2 PS

3b. Josie's doll measures between 6cm and 10cm.

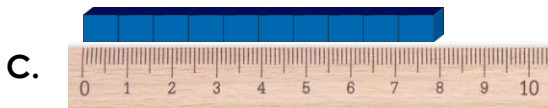
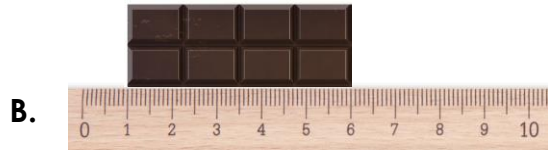
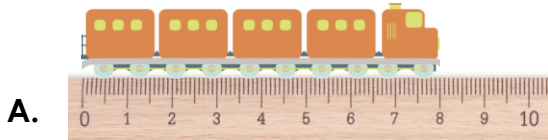
Find two possible measurements for her doll.



2 PS

Measure Length (cm)

4a. Which is the odd one out?



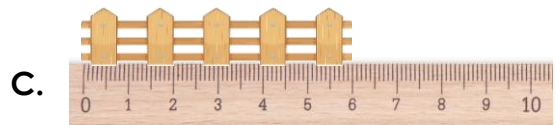
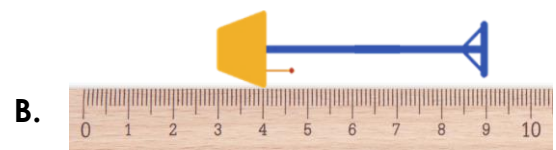
Explain your answer.



2 R

Measure Length (cm)

4b. Which is the odd one out?



Explain your answer.



2 R

5a. Zoe and Mike are measuring the length of a pencil.



Zoe says,



This pencil is 8cm long.

Mike says,

This pencil is 6cm long.



Who is correct? Explain your answer.



2 R

5b. Niall and Sarah are measuring the length of a shape.



Niall says,



The shape is 7cm long.

Sarah says,

This shape is 9cm long.



Who is correct? Explain your answer.



2 R

6a. Abdul's toy bottle measures between 10cm and 15cm.

What are the possible measurements his bottle of drink could be?



2 PS

6b. Pippa's colouring pencils measure between 9cm and 14cm.

What are the possible measurements her colouring pencils could be?



2 PS

Measure Length (cm)

7a. Which is the odd one out?



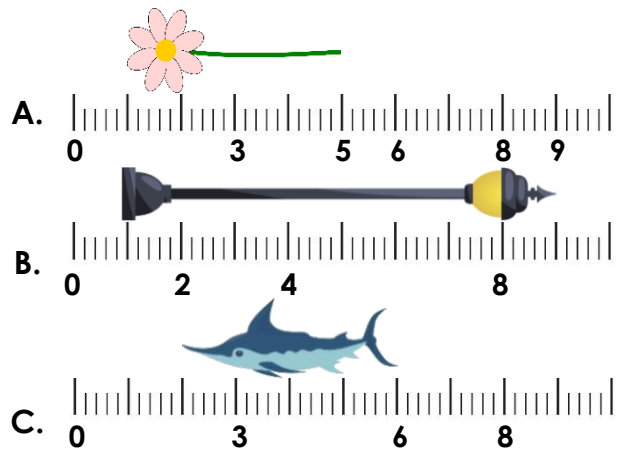
Explain your answer.



2 R

Measure Length (cm)

7b. Which is the odd one out?

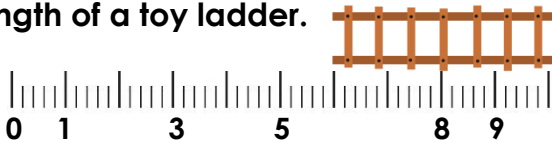


Explain your answer.



2 R

8a. Ciara and Tom are measuring the length of a toy ladder.



Ciara says,



The ladder is 4cm long.

Tom says,



The ladder is 6cm long.

Who is correct? Explain your answer.



2 R

8a. William and Isabel are measuring the length of a toy spear.



William says,



The spear is 9cm long.

Isabel says,



The spear is 7cm long.

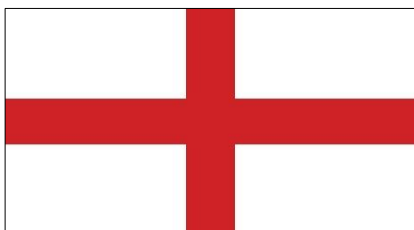
Who is correct? Explain your answer.



2 R

9a. Gemma's flag measures between 10cm and 20cm.

What are the possible measurements her flag could be if her answer is an even number?



2 PS

9b. Frank's teddy measures between 5cm and 15cm.

What are the possible measurements his teddy could be if his answer is an odd number?



2 PS

Reasoning and Problem Solving

Measure Length (cm)

Developing

- 1a. C. It is 5cm long whereas the others are 6cm long.
- 2a. Nadia. She has accurately read the measurement shown by the ruler.
- 3a. Various possible answers, for example: 5cm, 6cm, 7cm or 8cm.

Expected

- 4a. B. It is 5cm long whereas the others are 8cm long.
- 5a. Mike. He has taken into account that the object is measured from 2cm and not 0cm.
- 6a. Various possible answers, for example: 11cm, 12cm, 13cm and 14cm.

Greater Depth

- 7a. C. It is 5cm long, whereas the others are 4cm long.
- 8a. Ciara. She has taken into account that the object is measured from 6cm and not 0cm.
- 9a. Various possible answers, for example: 12cm, 14cm, 16cm and 18cm.

Reasoning and Problem Solving

Measure Length (cm)

Developing

- 1b. A. It is 2cm long whereas the others are 3cm long.
- 2b. Martin. He has accurately read the measurement shown by the ruler.
- 3b. Various possible answers, for example: 7cm, 8cm or 9cm.

Expected

- 4b. A. It is 7cm long, whereas the others are 6cm long.
- 5b. Niall. He has taken into account that the object is measured from 3cm and not 0cm.
- 6b. Various possible answers, for example: 10cm, 11cm, 12cm and 13cm.

Greater Depth

- 7b. B. It is 8cm long, whereas the others are 4cm long.
- 8b. Isabel. She has taken into account that the object is measured from 2cm and not 0cm.
- 9b. Various possible answers, for example: 7cm, 9cm, 11cm and 13cm.