

Reasoning and Problem Solving

Step 7: Temperature

National Curriculum Objectives:

Mathematics Year 1: (2M2) [Choose and use appropriate standard units to estimate and measure length/height in any direction \(m/cm\); mass \(kg/g\); temperature \(°C\); capacity \(litres/ml\) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels](#)

Differentiation:

Questions 1, 4 and 7 (Problem Solving)

Developing Fill in the missing temperatures. Missing numbers found by counting forwards in 1s, 2s and 10s on the thermometer.

Expected Fill in the missing temperatures. Missing numbers found by counting forwards in 2s, 5s and 10s on the thermometer.

Greater Depth Fill in the missing temperatures. Missing numbers found by counting forwards in 3s, 5s and 10s on the thermometer.

Questions 2, 5 and 8 (Problem Solving)

Developing Reading the temperature on the thermometers, identify which one is highest and which is the lowest.

Expected Reading the temperature on the thermometers, identify which one is highest and which is the lowest, counting on in 2s, 5s, and 10s to work out how much warmer it is.

Greater Depth Reading the temperature on the thermometers, identify which one is highest and which is the lowest, counting on in 2s, 3s, 5s, and 10s to work out how much warmer it is.

Questions 3, 6 and 9 (Reasoning)

Developing Explain why the answer is correct or incorrect reading scales with increments in 2s and 5s.

Expected Explain why the answer is correct or incorrect reading scales with increments in 2s and 5s, some increments missing.

Greater Depth Explain why the answer is correct or incorrect reading scales with increments in 3s and 10s, some increments missing.

More [Year 2 Mass Capacity and Temperature](#) resources.

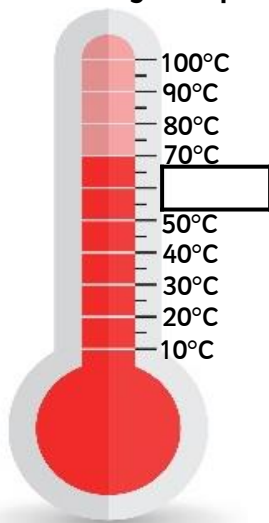
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Reasoning and Problem Solving – Temperature – Teaching Information

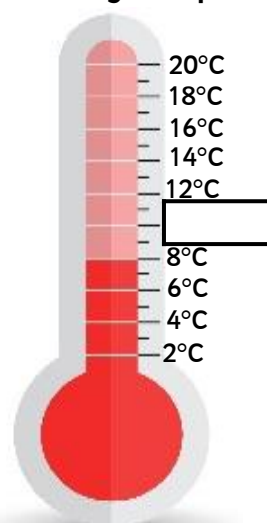
Reasoning and Problem Solving – Temperature.

1a. Fill in the missing temperature.



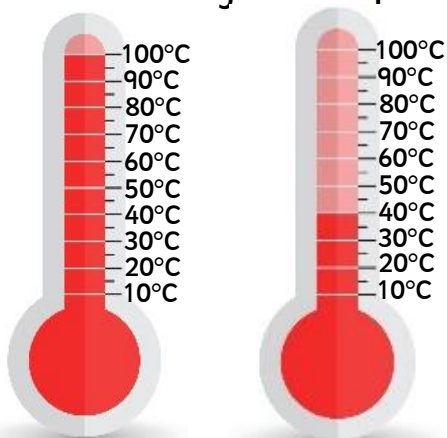
PS

1b. Fill in the missing temperature.



PS

2a. Which is the highest temperature?

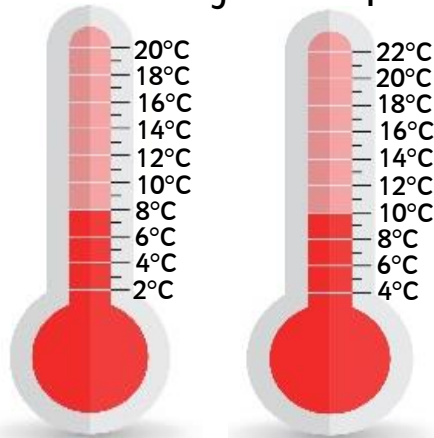


How much warmer is it?



PS

2b. Which is the highest temperature?

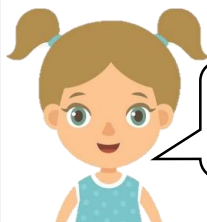


How much warmer is it?

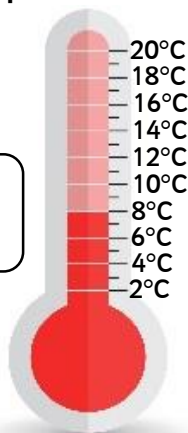


PS

3a. Lucy is reading the temperature outside.



It is 8°C



Is she correct?
Explain why.

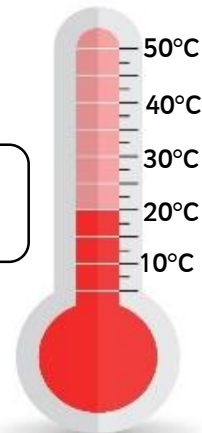


R

3b. Ron is reading the temperature outside.



It is 10°C



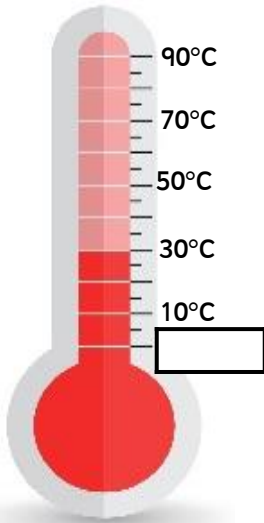
Is he correct?
Explain why.



R

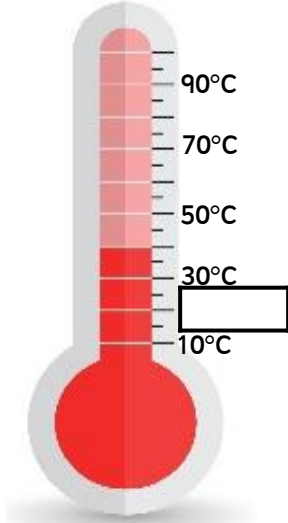
Reasoning and Problem Solving – Temperature.

4a. Fill in the missing temperature.

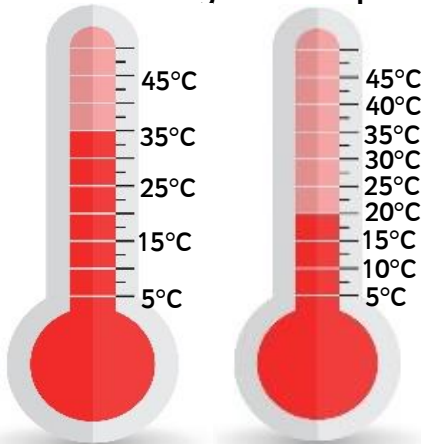


PS

4b. Fill in the missing temperature.



5a. Which is the highest temperature?

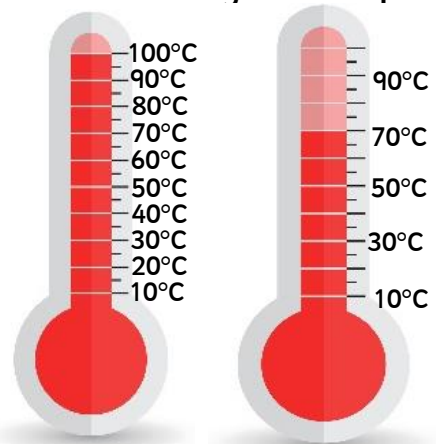


How much warmer is it?



PS

5b. Which is the highest temperature?

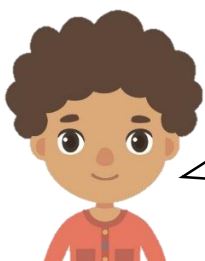


How much warmer is it?

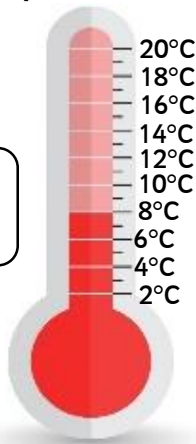


PS

6a. Lewis is reading the temperature outside.



It is 10°C



Is he correct?
Explain why.

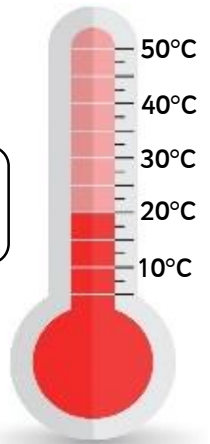


R

6b. Rose is reading the temperature outside.



It is 20°C



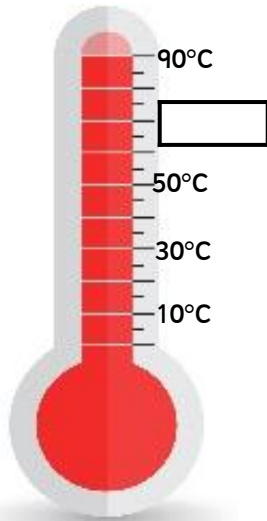
Is she correct?
Explain why.



R

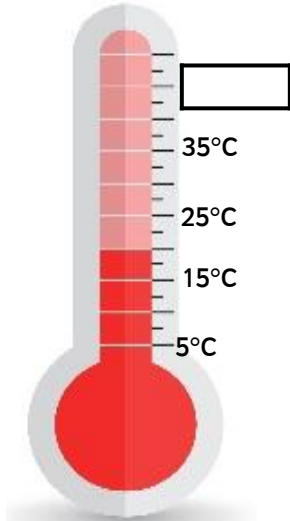
Reasoning and Problem Solving – Temperature.

7a. Fill in the missing temperature.



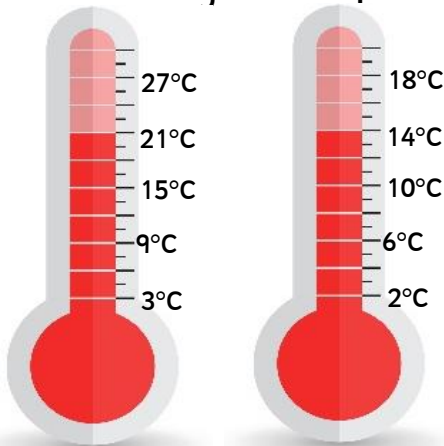
PS

7b. Fill in the missing temperature.



PS

8a. Which is the highest temperature?

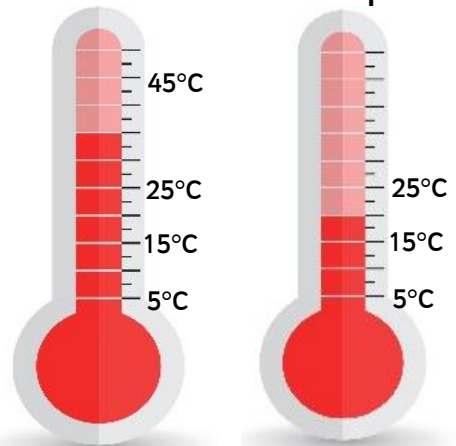


How much warmer is it?



PS

8b. Which is the lowest temperature?

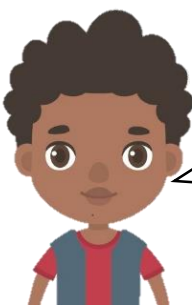


How much colder is it?

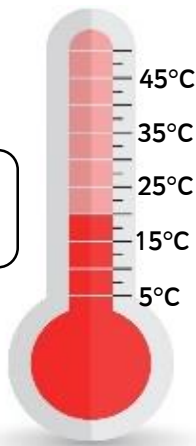


PS

9a. Sal is reading the temperature outside.



It is 15°C



Is he correct?
Explain why.

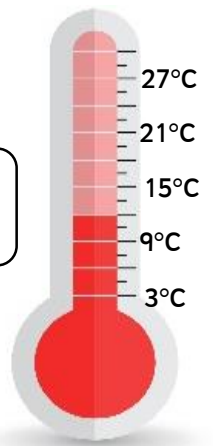


R

9b. Mia is reading the temperature outside.



It is 21°C



Is she correct?
Explain why.



R

Reasoning and Problem Solving – Temperature

Developing

- 1a. 60°C
- 1b. 10°C
- 2a. 100°C is the highest, it is warmer by 60°C .
- 2b. 10°C is the highest, it is warmer by 2°C .
- 3a. Yes, Lucy is correct the thermometer shows the temperature at 8°C .
- 3b. No, Ron is incorrect. The thermometer shows the temperature at 20°C .

Expected

- 4a. 5°C
- 4b. 20°C
- 5a. 35°C is the highest, it is warmer by 15°C .
- 5b. 100°C is the highest, it is warmer by 30°C .
- 6a. No, Lewis is incorrect. The thermometer shows 8°C not 10°C .
- 6b. Yes, Rose is correct as the thermometer shows 20°C .

Greater Depth

- 7a. 70°C
- 7b. 45°C
- 8a. 21°C is the highest, it is 7°C warmer.
- 8b. 20°C is the lowest, it is 15°C colder.
- 9a. No, Sal is incorrect. The thermometer reads 20°C not 15°C .
- 9b. Yes, Mia is correct as the thermometer shows 21°C .