



#CRESTInnovator



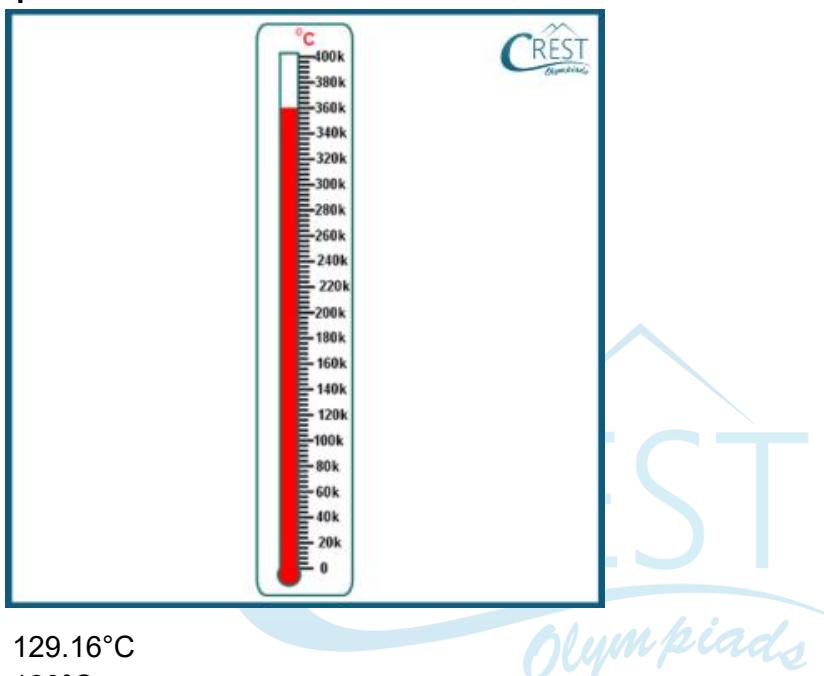
# CREST Mathematics Olympiad (CMO) Worksheet for **Class 5**



**Topic**  
**Temperature**

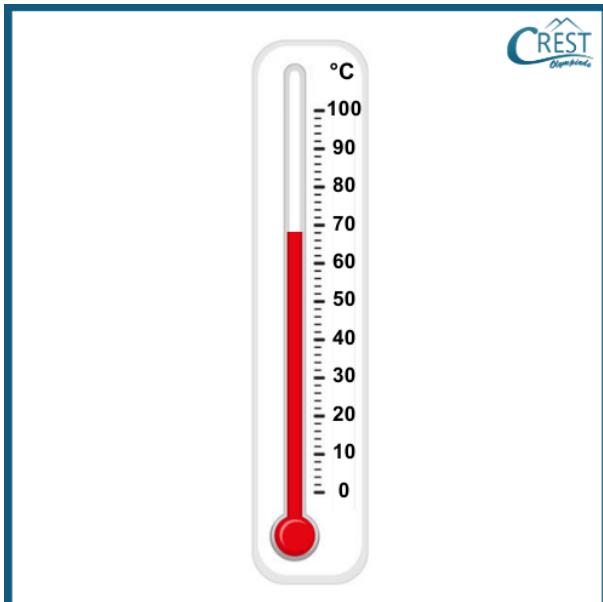
## Worksheet on Temperature

- On his birthday, the temperature of Cuba was  $31.2^{\circ}\text{C}$ . The temperature will fall to  $12.39^{\circ}\text{C}$  in a couple of days. What will be the temperature of Cuba now?
  - $8.81^{\circ}\text{C}$
  - $18.81^{\circ}\text{C}$
  - $18.18^{\circ}\text{C}$
  - $81.81^{\circ}\text{C}$
- What is the temperature in Celsius if the temperature is  $42.31\text{ K}$  more than the temperature shown on the thermometer?**

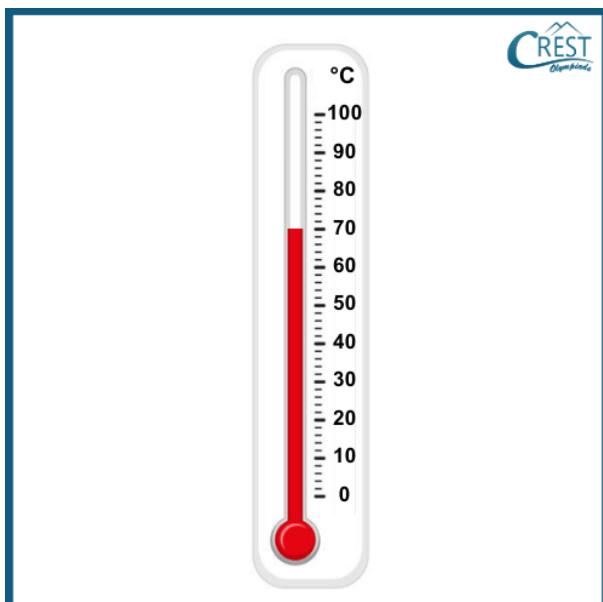


- What is the temperature in Celsius if the temperature is  $42.31\text{ K}$  more than the temperature shown on the thermometer?**
  - $129.16^{\circ}\text{C}$
  - $120^{\circ}\text{C}$
  - $128^{\circ}\text{C}$
  - $140^{\circ}\text{C}$
- The temperature in the morning on my balcony is  $21.8^{\circ}\text{C}$ . It went up by  $13.2^{\circ}\text{C}$  at noon and further went down by  $20.3^{\circ}\text{C}$  in the evening. What is the temperature in the evening?
  - $10.7^{\circ}\text{C}$
  - $14.7^{\circ}\text{C}$
  - $15.4^{\circ}\text{C}$
  - $17.4^{\circ}\text{C}$
- The temperature was  $43.2^{\circ}\text{C}$  on Sunday. On Monday, It had been dropping by  $6.24^{\circ}\text{C}$  and on Tuesday it was increasing by  $8.04^{\circ}\text{C}$ . What was the temperature in Fahrenheit on Tuesday?
  - $83^{\circ}\text{F}$
  - $93^{\circ}\text{F}$
  - $103^{\circ}\text{F}$
  - $113^{\circ}\text{F}$

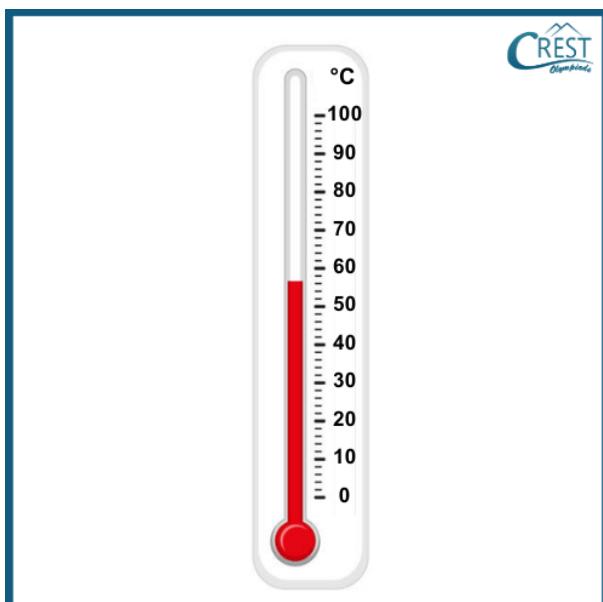
5. Which of the following thermometers shows 6°C less than the temperature shown on the given thermometer?



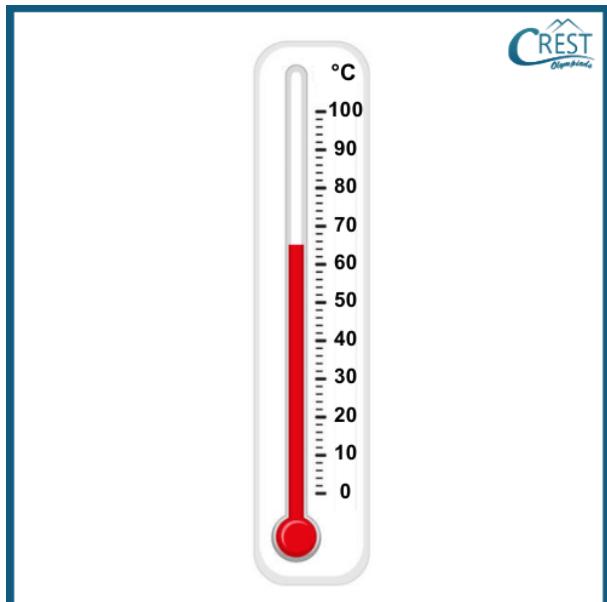
a.



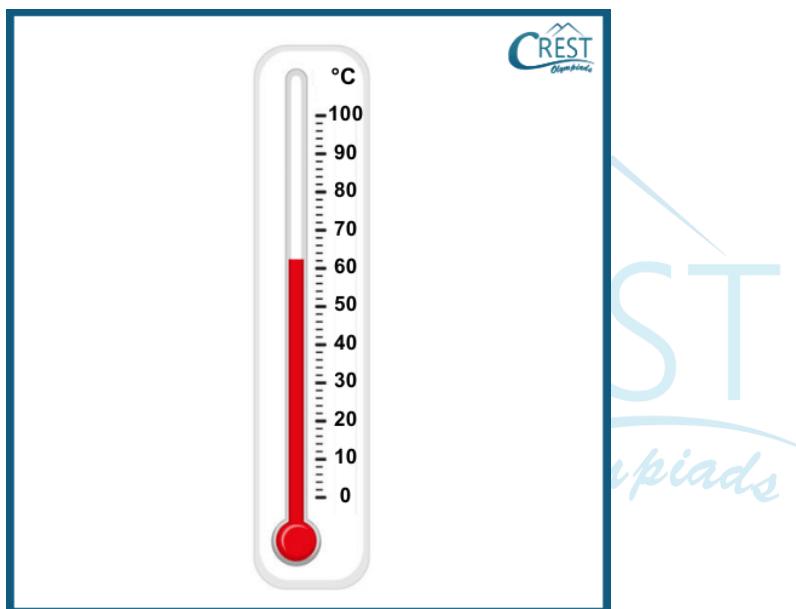
b.



C.



d.



## Answer Key

1. b -  $18.81^{\circ}\text{C}$

**Explanation:** Temperature of Cuba =  $31.2^{\circ}\text{C}$

Temperature falls (decrease) in a couple of days, temperature =  $12.39^{\circ}\text{C}$

$$\begin{aligned} \text{Now, the temperature of Cuba} &= (31.2 - 12.39)^{\circ}\text{C} \\ &= 18.81^{\circ}\text{C} \end{aligned}$$

2. a -  $129.16^{\circ}\text{C}$

**Explanation:** Temperature shown on the thermometer =  $360\text{ K}$

The room temperature is  $42.31\text{ K}$  more than the temperature shown on the thermometer.

$$\text{Room temperature} = 360\text{ K} + 42.31\text{ K} = 402.31\text{ K}$$

$$\text{Using } [{}^{\circ}\text{C}] = [\text{K}] - 273.15$$

$$\text{Room temperature in Kelvin} = 402.31\text{ K} - 273.15 = 129.16^{\circ}\text{C}$$

3. b -  $14.7^{\circ}\text{C}$

**Explanation:** Temperature in the morning =  $21.8^{\circ}\text{C}$

$$\begin{aligned} \text{Temperature at noon} &= 21.8^{\circ}\text{C} + 13.2^{\circ}\text{C} \\ &= 35^{\circ}\text{C} \end{aligned}$$

$$\begin{aligned} \text{Temperature in the evening} &= 35^{\circ}\text{C} - 20.3^{\circ}\text{C} \\ &= 14.7^{\circ}\text{C} \end{aligned}$$

4. d -  $113^{\circ}\text{F}$

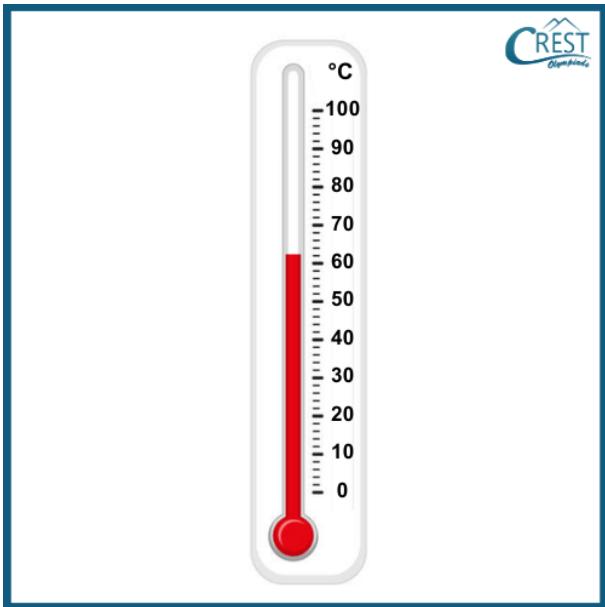
**Explanation:** Temperature on Sunday =  $43.2^{\circ}\text{C}$

$$\begin{aligned} \text{Temperature on Monday} &= (43.2 - 6.24) ^{\circ}\text{C} \\ &= 36.96^{\circ}\text{C} \end{aligned}$$

$$\begin{aligned} \text{Temperature on Tuesday} &= (36.96 + 8.04) ^{\circ}\text{C} \\ &= 45^{\circ}\text{C} \end{aligned}$$

$$\text{Using } [{}^{\circ}\text{F}] = [{}^{\circ}\text{C}] \times 9/5 + 32$$

$$\begin{aligned} \text{Temperature in fahrenheit on Tuesday} &= [45^{\circ}\text{C}] \times 9/5 + 32 \\ &= (81 + 32)^{\circ}\text{F} \\ &= 113^{\circ}\text{F} \end{aligned}$$



**Explanation:** Each marking shows  $2^{\circ}\text{C}$  on the thermometer.

So, temperature shown on the thermometer =  $68^{\circ}\text{C}$

Now,  $68^{\circ}\text{C} - 6^{\circ}\text{C} = 62^{\circ}\text{C}$

Hence, temperature on the thermometer used in the option (d) is  $6^{\circ}\text{C}$  less than the temperature shown in the thermometer.

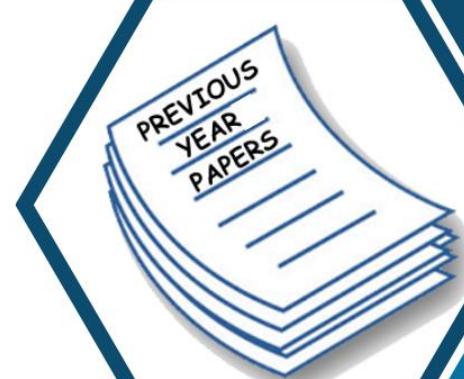
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