

9-4**Real-Life Career Activity*****Climatologist***

Climatologists study climate and weather patterns and make summaries from these patterns. The information in these summaries can be used in the design of heating and cooling systems, and sometimes in the design of entire buildings. For example, a building in an area with lots of snow needs to have a more powerful heating system than a building in an area with no snow.

Climatologists use terms such as mean, median, and mode in their climate summaries. Suppose a climatologist wants to find the mean, median, and mode for this set of temperatures.



15°, 17°, 19°, 21°, 21°, 22°, 22°, 22°, 24°, 27°

$$\begin{aligned}\text{mean} &= \frac{15 + 17 + 19 + 21 + 21 + 22 + 22 + 22 + 24 + 27}{10} \\ &= 21^\circ\end{aligned}$$

$$\begin{aligned}\text{median} &= \frac{21 + 22}{2} \\ &= 21.5^\circ\end{aligned}$$

$$\text{mode} = 22^\circ$$

The mean temperature is 21°, the median is 21.5°, and the mode is 22°.

Calculate the mean, median, and mode of each set of temperatures.

1. 51°, 55°, 58°, 59°, 62°, 63°, 63°, 63°, 66°, 70°

2. 0°, 5°, 8°, 9°, 12°, 12°, 13°, 14°, 16°, 17°

3. 50°, 51°, 52°, 52°, 53°, 53°, 53°, 53°, 56°, 57°