

Answer on Question #58333 – Math – Statistics and Probability

Question

The mean of seven numbers is 10. If six of the numbers are 2, 4, 8, 14, 16, 18, find the mode
14
5
9
8

Solution

$$\begin{aligned}\text{Mean of seven numbers} &= \frac{x_1 + x_2 + x_3 + x_4 + x_5 + x_6 + x_7}{7} \\ &= \frac{2 + 4 + 8 + 14 + 16 + 18 + x_7}{7} = 10\end{aligned}$$

$$(x_1 + x_2 + x_3 + x_4 + x_5 + x_6) + x_7 = 70$$

$$(2 + 4 + 8 + 14 + 16 + 18) + x_7 = 70$$

$$62 + x_7 = 70$$

$$x_7 = 8$$

Therefore, the numbers are 2, 4, 8, 8, 14, 16, 18.

Number 8 is the most frequent, therefore, it is the mode.

Answer: 8.