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Stats quiz

Q.20

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Sorted data

6 7 8 9 10 11 11 12 13 14

minimum = 6
or max = 14

median :- n = 10 is even   6 th element

Avg of $\left(\frac{n}{2}\right), \left(\frac{n}{2}\right) + 1 = $

$= $ 5th and 6th element

$= \frac{10 + 11}{2} = \frac{21}{2} = 10.5$

First half

$Q_1 = \left(\frac{n}{4}\right) + 1 = \left(\frac{10}{2}\right) + 1 = 3^{rd}$ elem

$Q_1 = 8$

Second half

$Q_3 = \left(\frac{n}{4}\right) \times 3 = $ 12

$IQ_4 = Q_3 - Q_1$
$= 12 - 8$
$IQ_4 = 4$

Q.20

mean $= \sum_{i=1}^{n} \frac{y_i}{n}$

$= \frac{6 + 7 + 8 + 9 + 10 + 11 + 11 + 12 + 13 + 14}{10}$

$\boxed{mean = 10.1}$

Final ans :-

minimum = 6	$Q_1 = 8$
maximum = 14	$Q_3 = 12$
median = 10.5	$IQR = 4$
mean = 10.1	mode = 11

Box plot