



Exercise 14G

Question 11:

Arranging the terms in an ascending order, we have

Height (in cm)	No of students Frequency	Cumulative Frequency
151	6	6
152	3	9
153	12	21
154	4	25
155	10	35
156	8	43
157	7	50

Here , $n=50$, which is even

$$\begin{aligned}
 \text{median} &= \frac{1}{2} \left[\left[\left(\frac{n}{2} \right) \right] \text{th term} + \left(\frac{n}{2} + 1 \right) \text{th term} \right] \\
 &= \frac{1}{2} [(25\text{th term} + 26\text{th term})] [\because n = 50] \\
 &= \left(\frac{154 + 155}{2} \right) \\
 &= \frac{309}{2} \\
 &= 154.5
 \end{aligned}$$

\therefore median height = 154.5 cm

***** END *****