



Find the nth term for the sequence

0 6 16 30 48
 6 10 14 18
 4 4 4

$a=2 \quad b=0 \quad c=-2$

$2n^2 - 2$

Height (x cm)	Frequency
$0 < x \leq 10$	3
$10 < x \leq 20$	7
$20 < x \leq 30$	12 *
$30 < x \leq 40$	31
$40 < x \leq 50$	27 *

80

The table shows the heights of some plants in a greenhouse

$LQ : 20^m$

$UQ : 60^m$

Work out the interquartile range

LQ

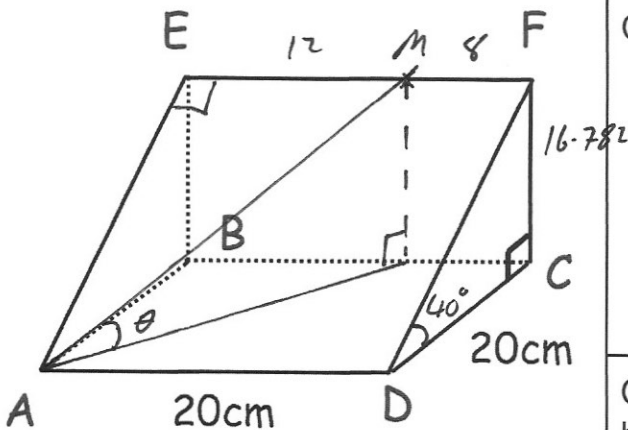
$20 + \frac{10}{12} \times 10 = 28.3$

UQ

$40 + \frac{7}{27} \times 10 = 42.592$

$42.592 - 28.3 = 14.259..$

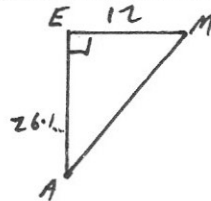
$IQR : 14.26 \text{ cm}$



Angle CDF = 40° $CF = \tan(40) \times 20 = 16.782$

M is a point on EF such that $EM : MF = 3 : 2$ $OF = \frac{20}{2+3} = 26.10815$

Calculate the distance AM



$AM^2 = 12^2 + 26.10815^2$

$AM = 28.73 \text{ cm}$

Calculate the size of the angle between AM and the base of the prism.

$\sin \theta = \frac{16.78199262}{28.73386965}$

$\theta = 35.736^\circ$