

Ex 2.4

Q3 7, 11, 12, 14, 14, 14, 18, 22, 22, 36

(i) Mode = 14

(ii) median =  $\frac{14+14}{2} = 14$

(iii) mean =  $\frac{7+11+12+14+14+14+18+22+22+36}{10}$   
 $= \frac{170}{10} = 17$

Q4  $\frac{21+25+16+x}{4} = 19$

$62+x = 76$

$x = 76 - 62$

$x = 14$

Q5 8, 4, 5, 3, x and y are the results

mode = 4  $\Rightarrow x = 4$

mean of 6 is 5  $\frac{8+4+5+3+4+y}{6} = 5$

$24+y = 30$

$y = 6$

Q6 9, 11, 11, 15, 17, 18, 100

mean =  $\frac{9+11+11+15+17+18+100}{7} = \frac{181}{7} = 25.877$

median = 15

Median represents the data best.

Q8 Mean of 12 is 76%  $\Rightarrow$  Total =  $12 \times 76 = 912\%$   
 Mean of 8 is 84%  $\Rightarrow$  Total =  $8 \times 84 = 672\%$

$\Rightarrow$  Total for 20 children =  $912\% + 672\% = 1584\%$   
 $\Rightarrow$  Mean =  $\frac{1584\%}{20} = 79.2\%$

Q9 Median; since 50% of the marks will be above the median.

Q12 (i) Mode = 4 people

(iii) Mean =  $\frac{(2 \times 2) + (3 \times 4) + (4 \times 6) + (5 \times 5) + (6 \times 2) + (7 \times 0) + (8 \times 1)}{2 + 4 + 6 + 5 + 2 + 0 + 1}$   
 $= \frac{4 + 12 + 24 + 25 + 12 + 0 + 8}{20} = \frac{85}{20} = 4.25$

(ii) Median; Middle of 20 =  $\frac{1}{2}(20+1) = 10.5$   
 $\Rightarrow$  Median lies between the 10<sup>th</sup> & 11<sup>th</sup> N<sup>os</sup>  
 $\Rightarrow$  Median = 4

Q13 (i) Mean =  $\frac{(15 \times 4) + (25 \times 15) + (35 \times 11) + (45 \times 10)}{4 + 15 + 11 + 10}$   
 $= \frac{1270}{40} = 31.75 = 32 \text{ years}$

(ii) In the 30-40 interval.

Q.15 (i) Mode = B.

Median:  $\frac{1}{2}(40+1) = 20\frac{1}{2} \Rightarrow$  between 20 & 21

$\Rightarrow$  Median = C

(ii) It is categorical Data.

Q.17 Thrown 50 times mean = 3.42

$\Rightarrow$  Total =  $50 \times 3.42 = 171$ .

$$\begin{array}{c|c} 1 & 2 \\ \hline 12 & 9 \end{array}$$

or

$$\begin{array}{c|c} 1 & 2 \\ \hline 9 & 12 \end{array}$$

$$\text{Scores} = (12 \times 1) + (2 \times 9) = 30$$

$$\text{Scores} = (9 \times 1) + (2 \times 12) = 33$$

A Difference of 3!

$\Rightarrow$  There is an increase or decrease of 3  
in the total scores.

$$\Rightarrow \text{Mean} = \frac{171+3}{50} = \frac{174}{50} = 3.48$$

OR

$$\text{Mean} = \frac{171-3}{50} = \frac{168}{50} = 3.36.$$