

Ex 2.6

Q2

(ii)	0	0, 1, 2, 4, 6, 6, 7, 8
	1	2, 4, 4, 5, 7, 8, 8, 9
	2	1, 1, 3, 5, 6
	3	1, 1, 2

Key: 2|1 means 21

(ii) 8

(iii)  $\frac{1}{2}(24+1) = 12.5 \Rightarrow \text{Median} = \frac{15+17}{2} = 16$

- Q4
- (i) Range  $84 - 22 = 62$
  - (ii) Lower quartile =  $Q_1 = \frac{1}{4}(19+1) = 5^{\text{th}} N^{\circ} \Rightarrow Q_1 = 47$
  - (iii) Upper quartile:  $\frac{3}{4}(19+1) = 15^{\text{th}} N^{\circ} \Rightarrow Q_3 = 67$
  - (iv) Interquartile Range =  $67 - 47 = 20$

Q8

(i)	French	English
	2, 1	3, 8
	7, 6, 5, 4, 4	4, 3, 4, 4
	8, 8, 7, 3, 3, 0	5, 2, 6, 8
	9, 6, 1, 1	6, 3, 5, 5, 8, 9
	8, 5	7, 1, 2, 2, 7, 9, 9
	1	8, 4, 5

(ii) median(F) =  $\frac{1}{2}(20+1) = 10.5$   
 $Q_2 = \frac{53+57}{2} = 55$

(iii) Median(E) =  $\frac{1}{2}(20+1) = 10.5$

$Q_2 = \frac{55+68}{2} = 66.5$

(iii) Better in English. Median mark is higher also more marks in the higher range

Q9

(i) Range (M2) =  $33 - 2 = 31$  mins

(ii) Median (M1) =  $\frac{1}{2}(20+1) = 10.5 \Rightarrow Q_2 = 17.5$  mins

(iii) 15

(iv) P (longer than 10 mins) =  $\frac{15}{20} = \frac{3}{4}$

(v)

Range (M1) =  $32 - 2 = 30$  mins

Range (M2) = 31 mins

Median (M1) = 17.5

Median (M2) = 17.5

Not much difference. Movie Matrix 2 has 7 waiting for more than 20 mins whereas Movie Matrix 1 has 9 people waiting more than 20 mins. Hence Matrix 2.