Brilliance Tuition Centre, Redbank Plains

Find the median and mode for the following:

1)

Score, x	Frequency, f	Cumulative Frequency, cf
1	1	
2	4	
3	7	
4	8	
5	10	

Median =
Mode =

2)

Score, x	Frequency, f	Cumulative Frequency, cf
1	5	
2	7	
3	8	
4	3	
5	6	

Median =
Mode =

3)

Score, x	Frequency, f	Cumulative Frequency, cf
0	4	
1	5	
2	1	
3	6	
4	3	

Median =
Mode =

4)

Score, x	Frequency, f	Cumulative Frequency, cf
11	2	
12	4	
13	3	
14	6	
15	7	

Median =
Mode =

5)

Score, x	Frequency, f	Cumulative Frequency, cf
1	2	
2	3	
3	1	
4	5	
5	6	

Median =
Mode =

6)

Score, x	Frequency, f	Cumulative Frequency, cf
10	4	
11	6	
12	2	
13	8	
14	1	

Median =
Mode =

MATHS WORKSHEETS- STATISTICS- FINDING MEDIAN AND MODE FROM THE FREQUENCY TABLE

Answer Key:

Mode= Value that appears most often in a set of data
Median= Middle number (ordered from lowest to highest)

Example 1

Score, x	Frequency, f	Cumulative Frequency, cf	Cumulative Frequency, cf		
1	2	2	2	14 or more? No	15 or more? No
2	7	2+7=9	9	14 or more? No	15 or more? No
3	4	9+4=13	13	14 or more? No	15 or more? No
4	6	13+6=19	19	14 or more? Yes	15 or more? Yes
5	9	19+9=28	28		
	28				

28 is an even number, so divide by 2. i.e., 14

14 is even number, so look for that place score (14) and the one after (15).

Look for 14th and 15th score

In the cf column, look for the first number that is **14 or more.** 14th score is 4

In the cf column, look for the first number that is **15 or more.** 15th score is 4

Median= 4, Mode= 5

Example 2

Score, x	Frequency, f	Cumulative Frequency, cf	Cumulative Frequency, cf		
1	4	4	4	16 or more? No	17 or more? No
2	5	4+5	9	16 or more? No	17 or more? No
3	7	9+7	16	16 or more? Yes	17 or more? No
4	6	16+6	22		17 or more? Yes
5	9	22+9	31		
	31				

31 is an odd number. Divide by 2. i.e., 15.5

Round to the next number = 16

Look for 16th score

16th score is 3

Median= 3, Mode= 5

Example 3

Score, x	Frequency, f	Cumulative Frequency, cf	Cumulative Frequency, cf	
1	3	3	3	17 or more? No
2	2	3+2	5	17 or more? No
3	4	5+4	9	17 or more? No

MATHS WORKSHEETS- STATISTICS- FINDING MEDIAN AND MODE FROM THE FREQUENCY TABLE				
4	7	9+7	16	17 or more? No
5	8	16+8	24	17 or more? Yes
6	9	24+9	33	
	33			

33 is an odd number. Divide by 2. i.e., 16.5

Round to the next number = 17 (odd number)

Look for 17th score only

Median= 5, Mode= 6

Example 4

Score, x	Frequency, f	Cumulative Frequency, cf
5	3	3
6	7	10
7	8	18
8	9	27
9	12	39
10	11	50
	50	

50/2 =25

25 is odd number

Look for 25th score only

Median= 8, Mode = 9

Answer Key:

1)

Score, x	Frequency, f	Cumulative Frequency, cf
1	1	1
2	4	5
3	7	12
4	8	20
5	10	30
	30	

Median = 30/2=15 =15th score=4

Mode = 5

2)

Score, x	Frequency, f	Cumulative Frequency, cf
1	5	5
2	7	12
3	8	20
4	3	23
5	6	29
	29	

Median = 29/2=14.5 =15th score= 3

Mode = 3

3)

Score, x	Frequency, f	Cumulative Frequency, cf
0	4	4
1	5	9
2	1	10
3	6	16
4	3	19
	19	

Median = 19/2= 9.5= 10th score=2
Mode = 3

4)

Score, x	Frequency, f	Cumulative Frequency, cf
11	2	2
12	4	6
13	3	9
14	6	15
15	7	22
	22	

Median = 22/2= 11th score= 14
Mode = 15

5)

Score, x	Frequency, f	Cumulative Frequency, cf
1	2	2
2	3	5
3	1	6
4	5	11
5	6	17
	17	

Median = 17/2= 8.5 =9th score =4
Mode =5

6)

Score, x	Frequency, f	Cumulative Frequency, cf
10	4	4
11	6	10
12	2	12
13	8	20
14	1	21
	21	

Median = 21/2= 10.5= 11th score= 12
Mode = 13