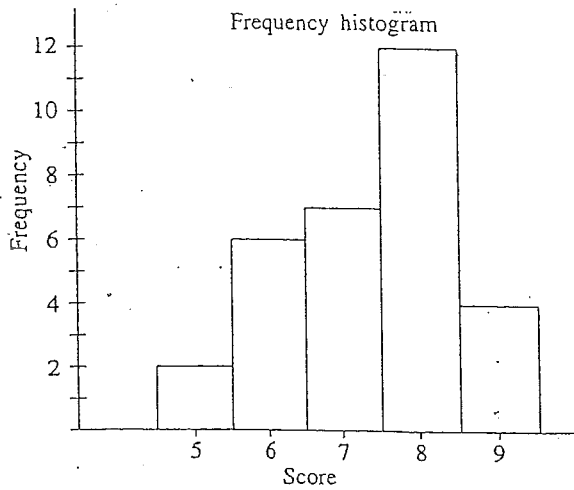


Year 9 - SYDNEY GIRLS H.S.
Statistics Topic Test - SEPT 2009

Name: _____

1. Use the frequency histogram below to complete the table.



x	f	cf
5		
6		
7		
8		
9		

- a) What fraction of scores were less than 7?
- b) What percentage of scores were more than 7?

2 a) Find the mean from the table below.

x	f
2	11
3	19
4	28
5	13
6	9

- b) What is the mode?

3. The mean of 6, 7, x and 3 is 4. Find x

4. A class of 30 pupils had a 10 question quiz.
The results were:

6, 7, 6, 5, 7, 5, 7, 10, 8, 6, 8, 7, 6, 10, 6, 7,
9, 10, 8, 6, 8, 9, 9, 7, 7, 7, 9, 5, 9, 8.

- a) Complete a frequency distribution table
(Show Score x , Frequency, fx and cf)

SCORE x	FREQUENCY f	$f \cdot x$	$c.f$
5			
6			
7			
8			
9			
10			

- b) Find the
- (i) Range of the scores
 - (ii) Mode of the scores
 - (iii) Median of the scores
 - (iv) Mean of the scores
- 4 c) Draw a cumulative frequency histogram and polygon.

5) Find the mean, mode, range and the median of the following data

x	f	fx
22	3	
23	8	
24	7	
25	9	
26	5	
27	4	
	$\Sigma f =$	$\Sigma fx =$

6) complete the following frequency distribution table

Class interval	Class centre x	f	fx
10-19	14.5	4	58
20-29	24.5	10	245
30-39	34.5	18	621
40-49	44.5	25	1112.5
50-59	54.5	14	763
60-69	64.5	8	516
70-79	74.5	1	74.5
		$\Sigma f =$	$\Sigma fx =$

i) Find the mean

ii) Modal class

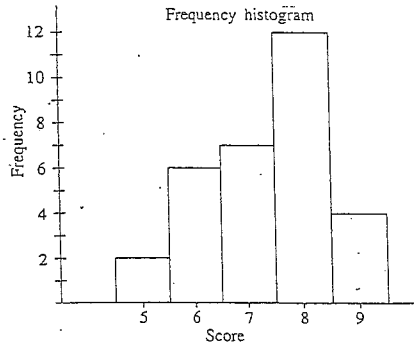
iii) Median class

Year 9
Statistics Topic Test

Name: _____

100%
Excellent

1. Use the frequency histogram below to complete the table.



x	f	cf
5	2	2
6	6	8
7	7	15
8	12	27
9	4	31

a) What fraction of scores were less than 7?

~~10/31~~ $\frac{8}{31}$ ✓

b) What percentage of scores were more than 7?

$\frac{16}{31} \times \frac{100}{1} = 51.613\%$
(51.61%) ✓

2 a) Find the mean from the table below.

x	f
2	11
3	19
4	28
5	13
6	9

$\Sigma = 80$

$\frac{310}{80} = 3.875$
(3.88) ✓

b) What is the mode?

~~3~~ ~~4~~ 4 ✓

3. The mean of 6, 7, x and 3 is 4. Find x

$(4 \times 4) \rightarrow 16 - 6 - 7 - 3 = 0$

$x = 0$ ✓

4. A class of 30 pupils had a 10 question quiz. The results were:

6, 7, 6, 5, 7, 5, 7, 10, 8, 6, 8, 7, 6, 10, 6, 7,
9, 10, 8, 6, 8, 9, 9, 7, 7, 7, 9, 5, 9, 8

a) Complete a frequency distribution table (Show Score x, Frequency, fx and cf)

Score x	frequency f	fx	cf.
5	3	15	3
6	6	36	9
7	8	56	17
8	5	40	22
9	5	45	27
10	3	30	30

b) Find the (i) Range of the scores

$10 - 5 = 5$ ✓

(ii) Mode of the scores

7 ✓

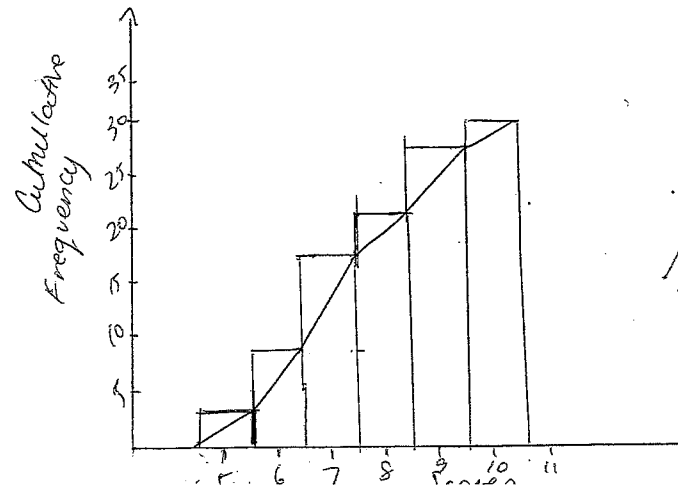
(iii) Median of the scores

7 ✓

(iv) Mean of the scores

$\frac{222}{30} = 7.4$ ✓

4 c) Draw a cumulative frequency histogram and polygon.



5) Find the mean, mode, range and the median of the following data

x	f	fx
22	3	66
23	8	184
24	7	168
25	9	225
26	5	130
27	4	108
	$\Sigma f = 36$	$\Sigma fx = 881$

$$\text{Mean} = 881 \div 36 = 24.472 \text{ (24.47)}$$

$$\text{Mode} = 25$$

$$\text{Range} = 5$$

$$\text{Median} = \frac{24+25}{2} = 24.5$$

6) complete the following frequency distribution table

Class interval	Class centre x	f	fx
10-19	14.5	4	58
20-29	24.5	10	245
30-39	34.5	18	621
40-49	44.5	25	1112.5
50-59	54.5	14	763
60-69	64.5	8	516
70-79	74.5	1	74.5
		$\Sigma f = 80$	$\Sigma fx = 3390$

i) Find the mean

$$\frac{3390}{80} = 42.375 \text{ (42.38)}$$

ii) Modal class

40-49

iii) Median class

40-49