

Univariate data Test A

Name: _____

Section B Short/Extended answer

- 1 As part of a survey, 30 smokers were asked if they preferred to quit smoking. They wrote Y if they preferred to quit smoking, N if they preferred not to quit and U if they were unsure. The results are shown below.

Y	Y	Y	Y	N
Y	U	N	Y	Y
Y	U	Y	Y	Y
N	Y	Y	U	Y
Y	N	U	Y	Y
N	Y	N	Y	Y

- (a) Summarise the results using a frequency distribution table.

- (b) Represent the data by using a bar chart.

-
- 2 A survey was conducted on car colours. This table shows the results of the survey.

blue	white	blue	red	red
red	white	red	blue	blue
white	red	white	red	red
red	white	blue	red	blue

- (a) Construct a dot plot of the data.
- (b) Calculate the percentage frequency of blue cars.

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- 3 The table shows the numbers of mud crabs caught by a fisherman on 11 trips.

Number of mudcrabs	Frequency
15 - 19	2
20 - 24	5
25 - 29	3
30 - 34	1

- (a) Draw a histogram of the data.

- 4 This frequency table shows the number of visits to the city by rural people in a month.

Number of visits	Frequency
0	3
1	7
2	5
3	8
4	4
5	2

- (a) Complete the table below.

Number of visits x	Frequency f	fx
0	3	
1	7	
2	5	
3	8	
4	4	
5	2	
Total		

- (b) Calculate the mean number of visits correct to 1 decimal place.

- 5 (a) Complete this table, which shows the areas of paddocks (in hectares) in Victoria.

Area (ha)	Frequency f	Midpoint x	fx
30 -	2		
40 -	1		
50 -	3		
60 -	1		
70 -	2		
80 -	5		
Total			

- (b) Calculate the mean area of paddocks correct to 1 decimal place.

- 6 Use your graphics calculator to calculate the standard deviation of the area of paddocks in question 6.

- 7 The fisheries department has drawn a stem-and-leaf plot showing the lengths of fish in a river.

Stem	Leaf
0	5 8
1	0 2 5
2	3 6 8 8 9
3	4

- (a) Find the lower quartile,
(b) Find the upper quartile.
(c) Find the interquartile range.

- 8 A biologist recorded the reaction times, in seconds, of 12 people, as follows:

5, 8, 6, 6, 5, 6, 5, 9, 12, 10, 9, 10.

Find the five-summary statistics, namely:

- (a) lowest score X_{\min}
(b) lower quartile Q_1
(c) median Q_2
(d) upper quartile Q_3
(e) highest score X_{\max} .

- 9 Construct a boxplot to illustrate the five-summary statistics in question 9.