Mathematics Essential

Test 4   Topics - Graphs

40

= _____ %

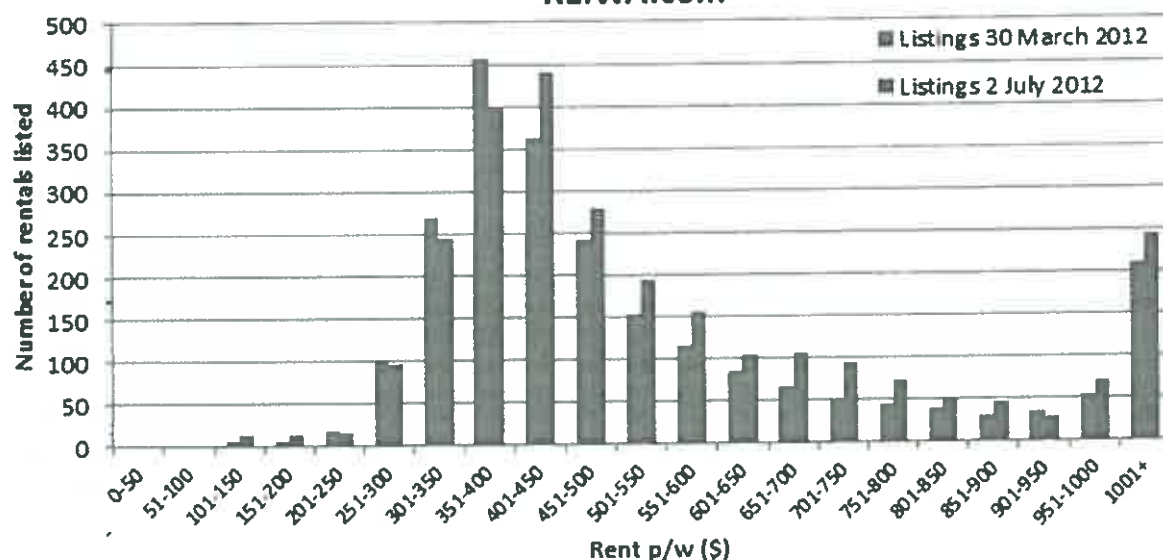|	
Total Time:	*45 minutes*
Total Reading:	*5 minutes*
Total Working:	*40 minutes*
Weighting:	*5% of the year.*
Equipment Allowed:	*Calculator*

You must include all working out to receive full marks
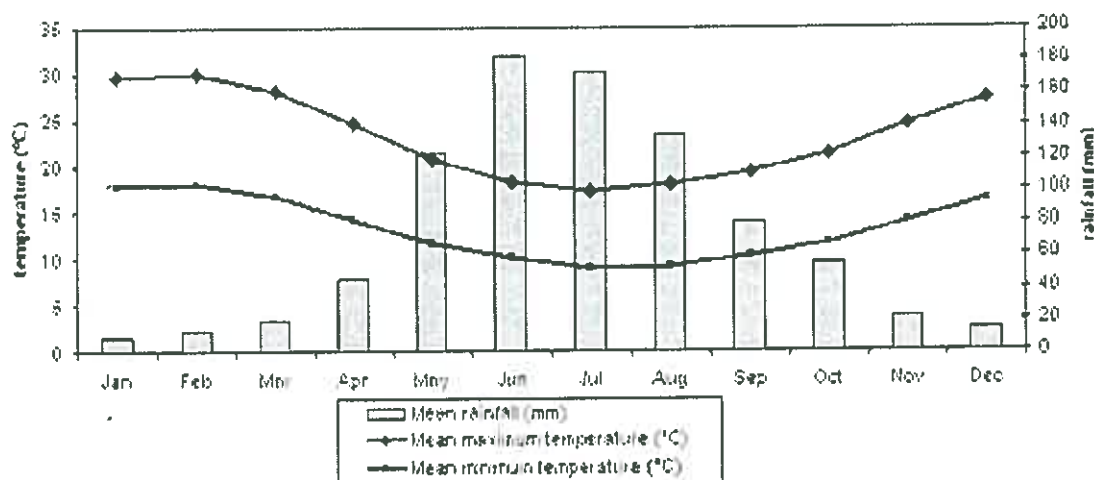
CALCULATOR ASSUMED

1. (5 marks:1, 1, 1, 2)

Price distribution of Perth rental properties listed on REIWA.com

a. From the above graph what is the lowest rent per week? $101 — $200 ✓

b. What is the highest rent per week? $1001 + ? ✓

c. Which rent bracket has the most number of rentals? $351 - 400 ✓

d. Explain why the $1001 + rent p/w column has a sharp increase compared to the previous columns

    1001 + means any rent higher than $1001 making the inteval larger ✓✓

2. (8 marks:1, 1, 2, 2, 2)

Legend:
- Mean rainfall (mm)
- Mean maximum temperature (°C)
- Mean minimum temperature (°C)

a. What is the mean maximum temperature in September? ≈ 20°C ✓

b. Which month has the coldest mean minimum temperature? July ✓

c. What is the difference between the mean maximum and mean minimum temperatures in May? 22 − 12 ✓ ≈ 10°C ✓

d. How much more rain falls in June than December?
32 − 3 ✓ ≈ 29 mm ✓

e. Describe the annual rainfall pattern?
rainfall is highest in winter months ✓
makes a smooth bell curve ✓

3. (10 marks;7,1,1,1)

56 children were asked which of the following hobbies they prefer. Their results are recorded in the table below.

	Computer games	Watch Films	Read	Total
Girls	5	11 ✓	6 ✓	22
Boys	19 ✓	11	4 ✓	34 ✓
Total	24	32 ✓	10	56 ✓

a. Complete the missing values

b. How many boys prefer computer games? 19 ✓

c. What percentage of children watched films? $\frac{22}{56} \times 100 = 39.3\%$ ✓

d. What percentage of girls read books?
$\frac{6}{56} \times 100 = 10.7\%$ ✓
or 60%
depends on student interpretation

4.   (6 marks)
The following data set shows the temperatures over 1 day.

Time	Noon	3pm	6pm	9pm	Midnight	3am	6am	9am	noon
Temperature	30C	33C	30C	29C	25C	23C	22C	28C	32C

Draw an appropriate graph for this data

√ Heading √√ labelled axis √√√ correct amounts .

5. (4 marks)

Police recorded the average number of people caught drink driving on the same section of
road on different nights of week.   *√ Heading √ axis labelled √√ correct amounts*

Monday	5	Tuesday	6	Wednesday	4	Thursday	10
Friday	12	Saturday	17	Sunday	8		

Represent the above information as a pictograph. Use a bottle to represent two people.

6. (4 marks: 1, 1, 2)
    This stem and leaf plot shows the scores of students in a class.

Stem	Leaves
2	7 3 3 3
3	3 5 7
4	2 1 3 4
5	5 6 7
6	6 7 8
7	9

a) How many students took the test? *18 √*
b) How many students got a score of 60? *0 √*
c) How many students got a score less than 50? *11 √√*

7. (3 marks)

Construct a stem and leaf plot to show the following.
83, 86, 92, 13, 28, 53, 49, 28, 49, 86, 50,
81, 18, 27, 68, 81, 45, 53, 21, 17, 55, 80

Stem	Leaf
1	7 3 8 7
2	8 8 7 1
3	
4	9 9 5
5	3 0 3 5
6	6 8
7	
8	3 6 1 1 0
9	2

*/// *