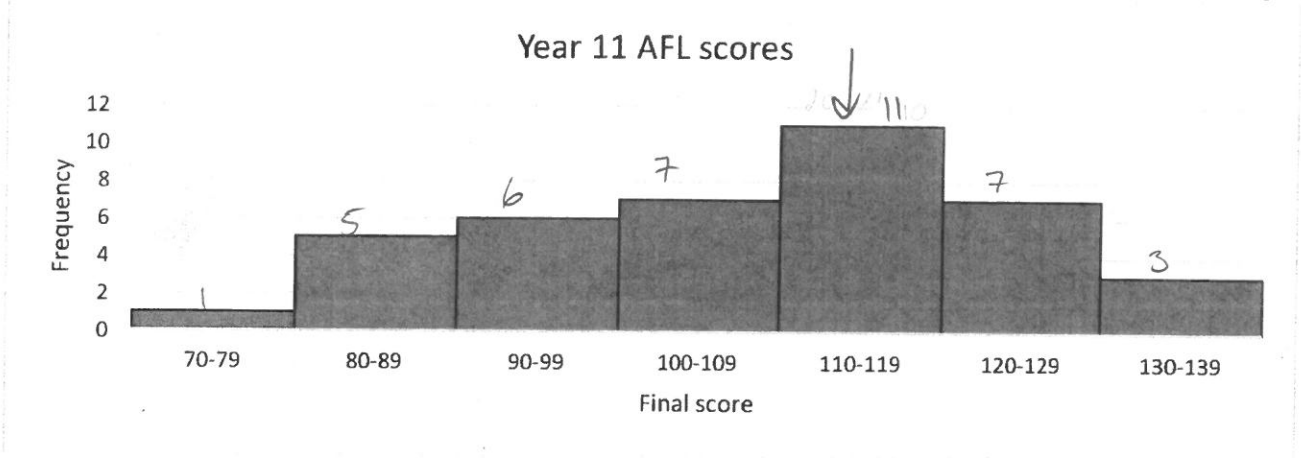
Name: _____ Class: _____		Date: _____
Baldivis Secondary College	**Year 11 Essential Mathematics Unit 2** **Mini Test 1.1 2018** **Topic – Data analysis and Displays** ***Full working out MUST be shown to get full marks for each question.***	SCORE: / 25

Total Time:	30 minutes
Weighting:	1%
Equipment:	To be provided by the student: Pen, pencil, ruler, scientific calculator, 1 single sided page of A4 notes

1. The Year 11 AFL coach created a histogram of their students scores across a two 20 game seasons.

[1+1+3 = 5 marks]



a. Which interval is the modal set?

110 - 119 Points

b. Which interval would the median be in?

110 - 119 Points

c. He records the next five game scores as 120, 124, 128, 131, 132.
After adding a 6th score, the mean of these 6 games is 126 points. What was the final score?

$$126 = \frac{120 + 124 + 128 + 131 + 132 + x}{6}$$

$$756 - (120 + 124 + 128 + 131 + 132) = x$$

$$121 = x$$

2. Jessica is saving for her first car. She has a list of the prices for 7 cars that she likes.

[5+2+2 = 9 marks]

Car	Price
2011 VW Passat	$9,000
2013 Honda Jazz	$10,790
2011 Mitsubishi ASX	$11,987
2008 Subaru Impreza	$7,200
2011 Holden Captiva	$11,990
2014 Ford Focus	$9,990
2009 Toyota Corolla	$9,989

a. What is the 5-number summary for Jessica's selection?

[7200, 9000, 9989,] 9990, [10790, 11987, 11,990]

Min 7,200
Q_1 9,000
Med 9,990
Q_3 11,987
Max 11,990

b. Calculate the interquartile range of price of the selection of cars

11987 - 9000 = 2987

c. What information does the interquartile range provide about the price of cars?

50% of all of her choices are between 9000 and 11,987.

3. The following are the sales prices for a selection of properties in Baldivis

$420 000, $380 000, $345 000, $1 290 000, $327 000

[5+2+2+2 = 11 marks]

[327, 345,] 380, [420, 1290]

$Q_1 \rightarrow 336$

$Q_3 \rightarrow 855$

a) Show how $1 290 000 is the outlier in this set of data.

IQR × 1.5 + Q_3 =

519 × 1.5 + Q_3 = 778.5 + 855 = 1633.5 (×1000)

b) Calculate the mean of the prices with and without the outlier included.

w/ → 552.4

w/out → 368

c) Calculate the median of the prices with and without the outlier included.

w → 380

w/out → 362.5

d) Would you use the mean or median to describe the property prices in Baldivis? Explain your answer in one to two sentences.

Median. → outliers throw out mean
→ median is middle of all scores without counting actual value)
* something relevant.