Baldivis Secondary College

Year 7 Test 2

Section 1: Non calculator paper

Equipment: One page of notes

____
59
=_____%

Name: Solutions **Date:** _____

1) Link the terms to the correct definition **(5 marks)**

Mean	The average
Median	Middle number of ordered data
Range	Difference between largest and lowest
Outlier	Data is much smaller or larger than most of the other data
Mode	Most common number

2) Solve the Linear equations showing full working **(11 marks)**

a) $2b = 24$ $b = 12$ ✓

b) $14 + y = 21$ $y = 7$ ✓

c) $7w - 13 = 36$ $7w = 49$ ✓ $w = 7$ ✓

d) $2y + 7 = 19$ $2y = 12$ ✓ $y = 6$ ✓

e) $\frac{(3+x)}{2} = 4$ $3 + x = 8$ ✓ $x = 5$ ✓

f) $\frac{(5x-3)}{7} = 6$ $5x - 3 = 42$ ✓ $5x = 45$ ✓ $x = 9$ ✓

3) Solve the following problems showing full working out **(6 marks)**

a) $\sqrt{100} = 10$ ✓

b) $\sqrt{49} = 7$ ✓

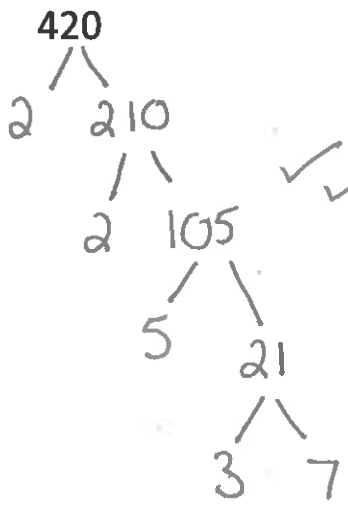
c) $11^2 = 121$ ✓

d) $8^2 = 64$ ✓

e) $3^3 = 27$ ✓

f) $2^3 = 8$ ✓

4) Complete the factor tree below and use this to write down the prime factors of 420 **(5 marks)**



✓✓✓

✓✓

$420 = 2^2 \times 3 \times 5 \times 7$

5) Answer the following questions using the data below **(4 marks)**

58, 64, 53, 82, 77, 57, 109, 68, 72, 64, 88, 79, 59, 65, 64

Determine the range 109 - 53 = 56 ✓

Determine the mode 64 ✓

Determine the outlier 109 ✓

Determine the median 65 ✓

53, 57, 58, 59, 64, 64, 64, 65, 68, 72, 77, 79, 82, 88, 109

Baldivis Secondary College

Year 7 Test 2

Section 2: Calculator paper

Equipment: One page of notes, calculator

Name: _____ **Date:** _____

1) A class of students wanted to know which gender could do the most sit-ups in one minute. The boys managed 5,16,18,11,17,42,43,58,25,26,26, 24,22,26, 31, 33, 34,30. Put the following data in an **ordered** stem and leaf below. **(4 marks)**

0	5
1	1 6 7 8
2	2 4 5 6 6 6
3	0 1 3 4
4	2 3
5	8

(-½ each error)

Key: 2|3 = 23

2) ***Boys (show all working not just the answer)***

What is the mean? **(1 mark)**

$\frac{476}{18} = 26.4$ ✓

What is the mode? **(1mark)**

26 ✓

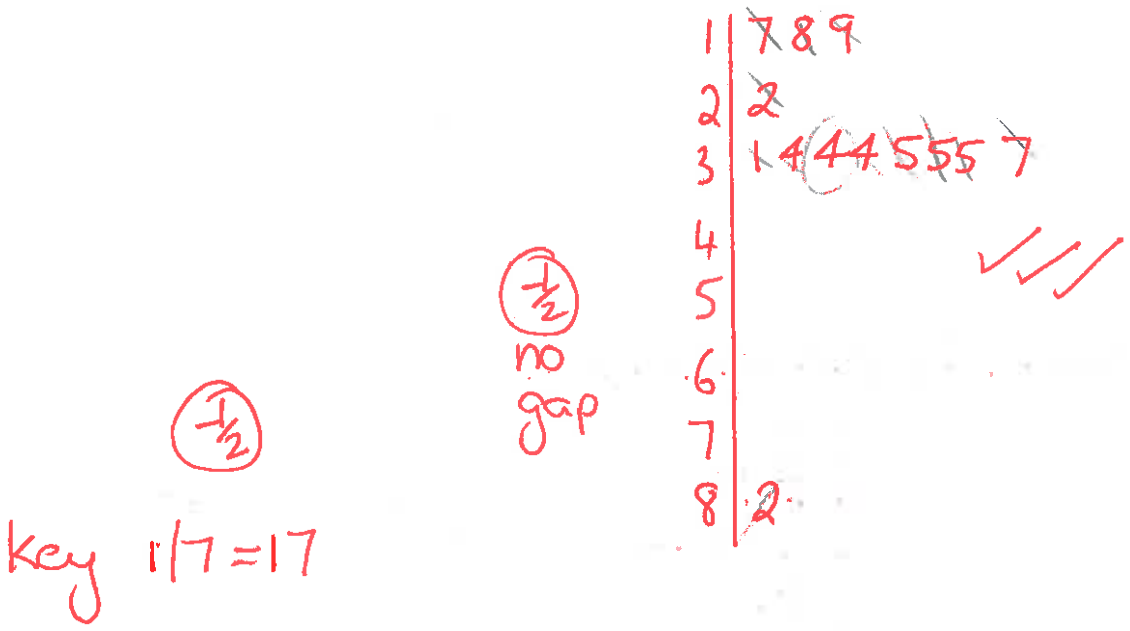
What is the range? **(1mark)**

53 ✓

Explain what would happen to the mean, mode, median and range if we added the number 2? **(4marks)**

The mean would decrease ✓
The mode would not change ✓
The median would not change ✓
The range would increase ✓

3) The girls managed 37, 34, 35, 22, 34, 31, 18, 19, 17, 34, 35, 82, 35 sit-ups. Put the following data into an **ordered** stem and leaf. **(4 marks)**



4) ***Girls (show all working not just the answer)***

What is the Median? **(1mark)**

34 ✓

What is the outlier? **(1mark)**

82 ✓

What is the Range? **(1mark)**

65 ✓

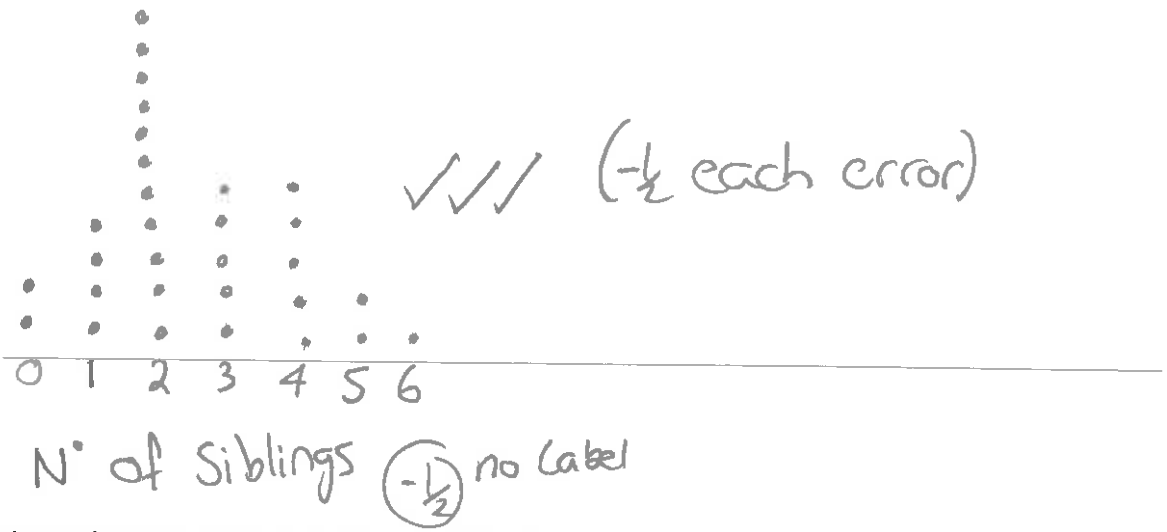
Which gender is the strongest? Show the differences between the girls and the boys mean, mode, median and range. **(4 marks)**

girls Mean = $\frac{433}{13}$ = 33.31 ✓ boys median = 26 ✓

Choice ✓ and justification ✓.

5) A maths class recorded how many siblings they had 2, 3, 4, 2, 3, 6, 1, 2, 0, 3, 5, 4, 1, 2, 2, 2, 3, 4, 5, 2, 4, 0, 3, 2, 2, 1, 1, 2, 2, 4. Put the following data in a Dot Plot below. **(4 marks)**

Number of Siblings in Maths Class (½ no heading)



✓✓✓ (-½ each error)

N° of Siblings (-½ no label)

What is the least common number of siblings? **(1 mark)**

6 ✓

What is the most common number of siblings? **(1 mark)**

2 ✓

~End of Test~