

# Essential Numeracy Assessment

## Stage 3 - Statistics and Probability - Pre NSW Syllabus Assessment

Name: \_\_\_\_\_

Pre-assessment mark:	Year 5	Pre-assessment mark $\geq 20$	<b>A</b>	Pre-assessment mark $\geq 35$	Year 6
		Pre-assessment mark 17–19	<b>B</b>	Pre-assessment mark 30–34	
Pre-assessment mark 14–16		<b>C</b>	Pre-assessment mark 26–29		
Pre-assessment mark 11–13		<b>D</b>	Pre-assessment mark 21–25		
Pre-assessment mark $\leq 10$		<b>E</b>	Pre-assessment mark $\leq 20$		
NSW Common Grade:					

NSW Syllabus Outcome MA3-18SP

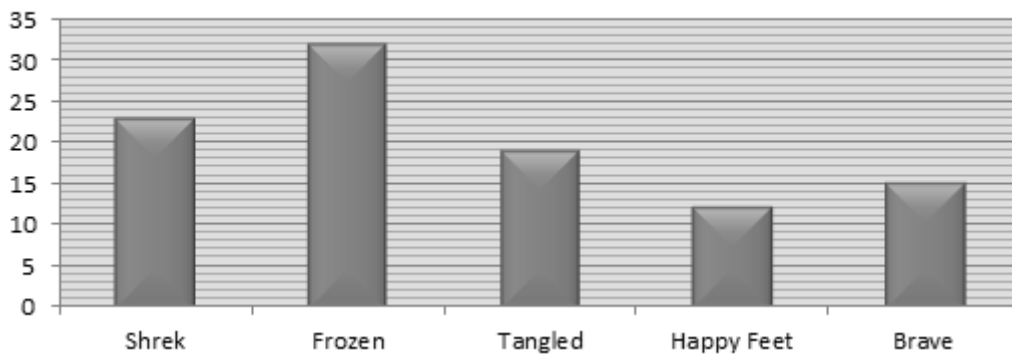
Data 1 – Data Representation and Interpretation (ACMSP118)

### Question 1

4 Marks

Which statement is correct for the bar graph?

**Favourite Animated Movies**



- 21 students like Shrek.
- More students like Happy Feet and Brave than Frozen.
- Brave is the least favourite movie.
- More students like Frozen than Tangled and Happy Feet.

NSW Syllabus Outcome MA3-18SP

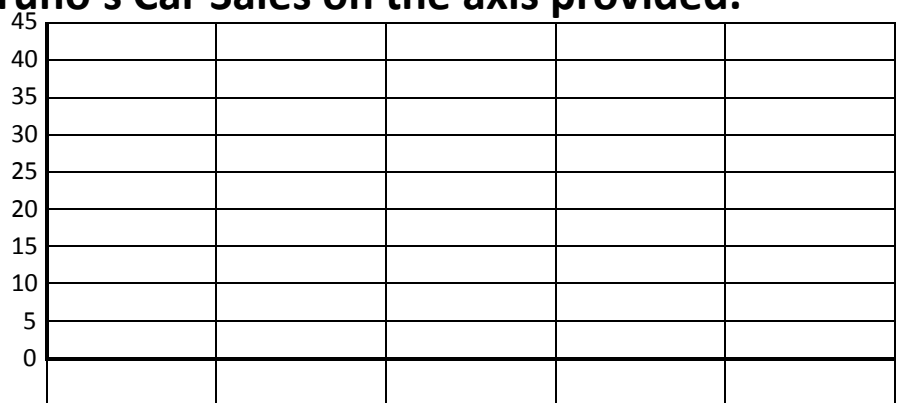
Data 1 – Data Representation and Interpretation (ACMSP119)

### Question 2

5 Marks

Construct a bar chart of Bruno's Car Sales on the axis provided.

Bruno's Car Sales	
Year	Sales
2010	15
2011	20
2012	35
2013	30
2014	45



NSW Syllabus Outcome MA3-18SP

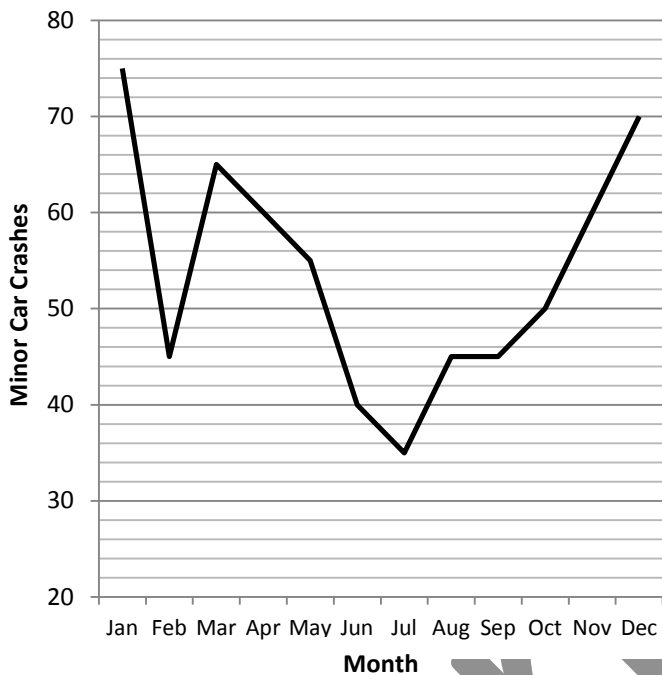
Data 1 – Data Representation and Interpretation (ACMSP120)

### Question 3

3 Marks

Read the line graph and answer the questions.

Minor Car Crashes – Melbourne CBD 2014



a) How many car crashes happened in May?

b) Which month had the least number of car crashes?

c) Which two months had the most number of crashes?

NSW Syllabus Outcome MA3-19SP

Chance 1 – Chance (ACMSP116)

### Question 4

6 Marks

Draw a line from each probability description to its correct place on the probability scale.



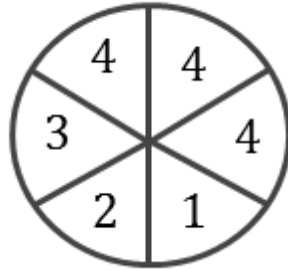
NSW Syllabus Outcome MA3-19SP

Chance 1 – Chance (ACMSP117)

### Question 5

4 Marks

Look at the spinner and answer the questions.



- What is the number of possible outcomes?
- What is the probability of landing on number 1?

NSW Syllabus Outcome MA3-18SP

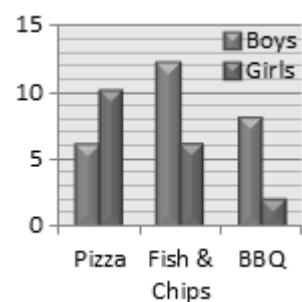
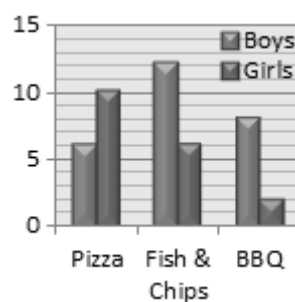
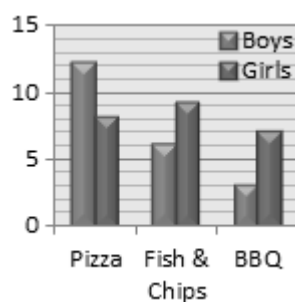
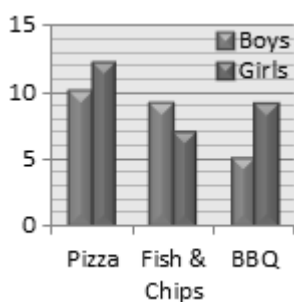
Data 2 – Data Representation and Interpretation (ACMSP147)

### Question 6

4 Marks

Which side-by-side column graph is correct for the data in the table?

Favourite Meal	Boys	Girls
Pizza	12	8
Fish & Chips	6	9
Barbecue	3	7



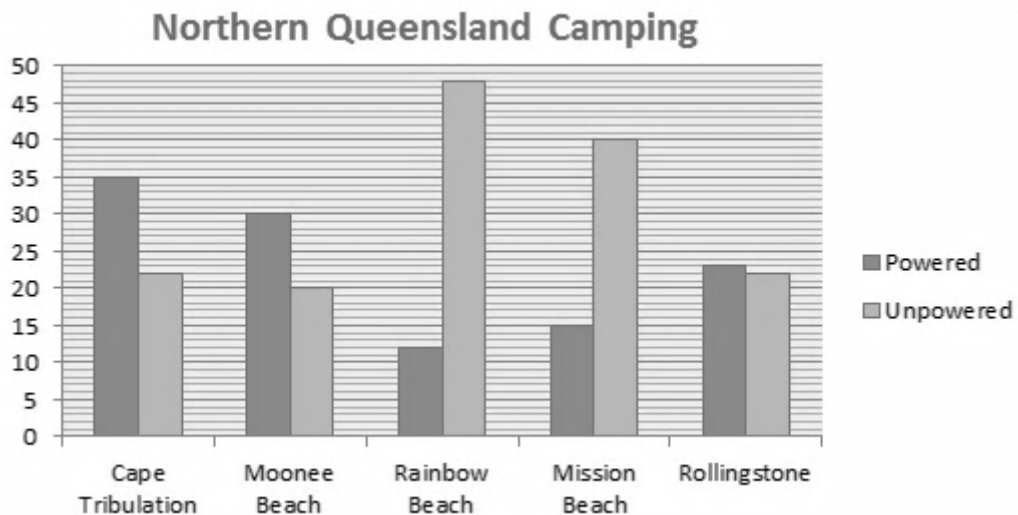
NSW Syllabus Outcome MA3-18SP

Data 2 – Data Representation and Interpretation (ACMSP148)

### Question 7

4 Marks

The side-by-side bar graph below shows the amount of camping sites at six different locations in Queensland. How many campsites in total are at Rainbow Beach?



NSW Syllabus Outcome MA3-19SP

Chance 2 – Chance (ACMSP146)

### Question 8

3 Marks

a) When a coin is tossed once, what is the probability of each outcome occurring?



Pr (head) = \_\_\_\_\_ Pr (tail) = \_\_\_\_\_

b) If a coin is tossed 50 times, how many times would you expect the coin to land on tails?

NSW Syllabus Outcome MA3-19SP

Chance 2 – Chance (ACMSP144)

### Question 9

3 Marks

If a card is chosen without looking, what is the probability of selecting a club as a fraction, decimal and percentage?



fraction = \_\_\_\_\_ decimal = \_\_\_\_\_ percentage = \_\_\_\_\_

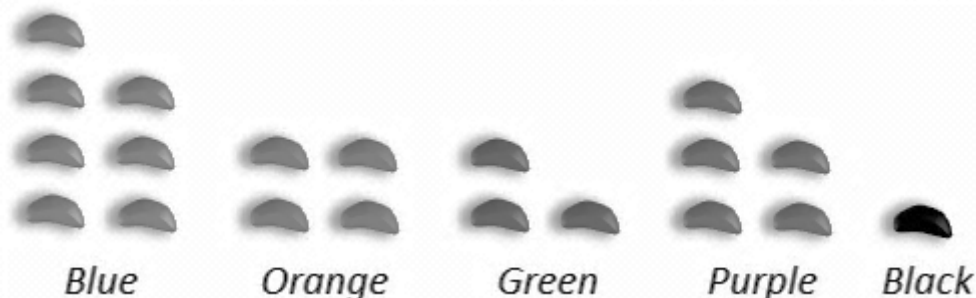
NSW Syllabus Outcome MA3-19SP

Chance 2 – Chance (ACMSP145)

### Question 10

4 Marks








A random sample of 20 jelly beans have been selected from a packet of 100 jelly beans. Based on this sample, how many blue jelly beans would you expect to find in the entire packet?



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### Teacher Reference

Question	NSW Syllabus Outcome	Australian Curriculum Sub strand	Content Description
1	Data 1 uses appropriate methods to collect data and constructs, interprets and evaluates data displays, including dot plots, line graphs and two-way tables MA3-18SP	Data Representation and Interpretation Year 5	Pose questions and collect categorical or numerical data by observation or survey (ACMSP118) 
2			Construct displays, including column graphs, dot plots and tables, appropriate for data type, with and without the use of digital technologies (ACMSP119) 
3			Describe and interpret different data sets in context (ACMSP120) 
4	Chance 1 conducts chance experiments and assigns probabilities as values between 0 and 1 to describe their outcomes MA3-19SP	Chance Year 5	List outcomes of chance experiments involving equally likely outcomes and represent probabilities of those outcomes using fractions (ACMSP116) 
5			Recognise that probabilities range from 0 to 1 (ACMSP117) 
6	Data 2 uses appropriate methods to collect data and constructs, interprets and evaluates data displays, including dot plots, line graphs and two-way tables MA3-18SP	Data Representation and Interpretation Year 6	Interpret and compare a range of data displays, including side-by-side column graphs for two categorical variables (ACMSP147) 
7			Interpret secondary data presented in digital media and elsewhere (ACMSP148) 

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8	Chance 2	conducts chance experiments and assigns probabilities as values between 0 and 1 to describe their outcomes MA3-19SP	Chance Year 6	Compare observed frequencies across experiments with expected frequencies (ACMSP146) 
9				Describe probabilities using fractions, decimals and percentages (ACMSP144) 
10				Conduct chance experiments with both small and large numbers of trials using appropriate digital technologies (ACMSP145) 

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