

6. Types of Data	<p>Qualitative Data – non-numerical data</p> <p>Quantitative Data – numerical data</p> <p>Continuous Data – data that can take any numerical value within a given range.</p> <p>Discrete Data – data that can take only specific values within a given range.</p>	<p>Qualitative Data – eye colour, gender etc.</p> <p>Continuous Data – weight, voltage etc.</p> <p>Discrete Data – number of children, shoe size etc.</p>						
7. Grouped Data	<p>Data that has been bundled in to categories.</p> <p>Seen in grouped frequency tables, histograms, cumulative frequency etc.</p>	<table border="1"> <thead> <tr> <th>Foot length, l, (cm)</th> <th>Number of children</th> </tr> </thead> <tbody> <tr> <td>$10 \leq l < 12$</td> <td>5</td> </tr> <tr> <td>$12 \leq l < 17$</td> <td>53</td> </tr> </tbody> </table>	Foot length, l , (cm)	Number of children	$10 \leq l < 12$	5	$12 \leq l < 17$	53
Foot length, l , (cm)	Number of children							
$10 \leq l < 12$	5							
$12 \leq l < 17$	53							
8. Primary /Secondary Data	<p>Primary Data – collected yourself for a specific purpose.</p> <p>Secondary Data – collected by someone else for another purpose.</p>	<p>Primary Data – data collected by a student for their own research project.</p> <p>Secondary Data – Census data used to analyse link between education and earnings.</p>						
9. Mean	<p>Add up the values and divide by how many values there are.</p>	<p>The mean of 3, 4, 7, 6, 0, 4, 6 is</p> $\frac{3 + 4 + 7 + 6 + 0 + 4 + 6}{7} = 5$						
10. Median Value	<p>The middle value.</p> <p>Put the data in order and find the middle one. If there are two middle values, find the number half way between them by adding them together and dividing by 2.</p>	<p>Find the median of: 4, 5, 2, 3, 6, 7, 6</p> <p>Ordered: 2, 3, 4, 5, 6, 6, 7</p> <p>Median = 5</p>						
11. Mode /Modal Value	<p>Most frequent/common.</p> <p>Can have more than one mode (called bi-modal or multi-modal) or no mode (if all values appear once)</p>	<p>Find the mode: 4, 5, 2, 3, 6, 4, 7, 8, 4</p> <p>Mode = 4</p>						
12. Range	<p>Highest value subtract the Smallest value</p> <p>Range is a 'measure of spread'. The smaller the range the more <u>consistent</u> the data.</p>	<p>Find the range: 3, 31, 26, 102, 37, 97.</p> <p>Range = $102 - 3 = 99$</p>						
13. Expression	<p>A mathematical statement written using symbols, numbers or letters,</p>	$3x + 2$ or $5y^2$						
14. Equation	<p>A statement showing that two expressions are equal</p>	$2y - 17 = 15$						
15. Identity	<p>An equation that is true for all values of the variables</p> <p>An identity uses the symbol: \equiv</p>	$2x \equiv x+x$						
16. Formula	<p>Shows the relationship between two or more variables</p>	<p>Area of a rectangle = length x width or $A = L \times W$</p>						
17. Simplifying Expressions	<p>Collect 'like terms'.</p> <p>Be careful with negatives.</p> <p>x^2 and x are not like terms.</p>	$2x + 3y + 4x - 5y + 3$ $= 6x - 2y + 3$ $3x + 4 - x^2 + 2x - 1 = 5x - x^2 + 3$						

18. x times x	The answer is x^2 not $2x$.	Squaring is multiplying by itself, not by 2.
19. $p \times p \times p$	The answer is p^3 not $3p$	If $p=2$, then $p^3=2 \times 2 \times 2=8$, not $2 \times 3=6$
20. $p + p + p$	The answer is $3p$ not p^3	If $p=2$, then $2+2+2=6$, not $2^3 = 8$
21. Expand	To expand a bracket, multiply each term in the bracket by the expression outside the bracket.	$3(m + 7) = 3x + 21$