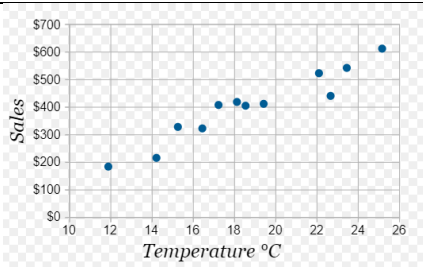


Year 11 – Module 8 Foundation

Topic/Skill	Definition/Tips	Example																								
Mean	Add up all data values, divide by how many there are. Shares the different amounts out equally.	e.g. the mean of 3, 5, 6, and 6 total = 20 mean = 5																								
Mode	Most frequent data value	Mode of 2, 3, 5, 2, 6, 7, 2, 8, 2, 3, 2 Is 2																								
Range	Highest data value, subtract the lowest data value	Range of 3, 7, 1, 7, 2, 8, 2, 6, 10 Is $10 - 1 = 9$																								
Median	Middle value when data has been put into ascending order	Median of 2, 6, 3, 8, 1, 9, 2, 1 Ordered: 1, 1, 2, 2, 3, 6, 8, 9 Middle between 2 and 3, so 2.5																								
Outlier	Piece of data that does not fit the general trend of the data values	3, 3, 4, 5, 4, 3, 4, 98 98 would be the outlier																								
Speed	How far you can travel in a single unit of time e.g. per hour or per minute	34 mph means you can travel 34 miles in one hour Therefore, you can travel 68 miles in 2 hours e.t.c.																								
Estimate of the mean for grouped data	1) Find the midpoint of the interval 2) Multiply by frequency 3) Add 4) Divide by total frequency	<table><tr><th>Class Interval</th><th>Mid-point</th><th>Frequency</th><th>Mid-point \times Frequency</th></tr><tr><td>$140 \leq h < 150$</td><td>145</td><td>6</td><td>$145 \times 6 = 870$</td></tr><tr><td>$150 \leq h < 160$</td><td>155</td><td>16</td><td>$155 \times 16 = 2480$</td></tr><tr><td>$160 \leq h < 170$</td><td>165</td><td>21</td><td>$165 \times 21 = 3465$</td></tr><tr><td>$170 \leq h < 180$</td><td>175</td><td>8</td><td>$175 \times 8 = 1400$</td></tr><tr><td>Totals</td><td></td><td>51</td><td>8215</td></tr></table> <p>So $8215 \div 51 = 161.0784...$</p>	Class Interval	Mid-point	Frequency	Mid-point \times Frequency	$140 \leq h < 150$	145	6	$145 \times 6 = 870$	$150 \leq h < 160$	155	16	$155 \times 16 = 2480$	$160 \leq h < 170$	165	21	$165 \times 21 = 3465$	$170 \leq h < 180$	175	8	$175 \times 8 = 1400$	Totals		51	8215
Class Interval	Mid-point	Frequency	Mid-point \times Frequency																							
$140 \leq h < 150$	145	6	$145 \times 6 = 870$																							
$150 \leq h < 160$	155	16	$155 \times 16 = 2480$																							
$160 \leq h < 170$	165	21	$165 \times 21 = 3465$																							
$170 \leq h < 180$	175	8	$175 \times 8 = 1400$																							
Totals		51	8215																							
Modal class	Most common interval	For the example above this would be $160 \leq h < 170$																								
Scatter graph	Graph to show a relationship between two things. Points on the graph are not joined together.																									
Correlation	If there is a relationship between the two things plotted on a scatter graph.	Positive - points are increasing as you move along the x axis Negative - points are decreasing as you more along the x axis																								
Line of best fit	Line to help estimate values from a scatter graph	Must be a straight line following the general trend of the points with roughly half the points above and half below.																								