



AusVELS 9.0 Students will be able to graph simple non-linear relations

Sketching Parabolas showing all key points

Step 1	Write the question	Sketch the graph of $y = x^2 - 5x - 6$				
Step 2	Decide if the parabola opens up or down? Is the turning point a minimum or maximum?	Co-efficient of x^2 is positive, therefore the parabola has a minimum turning point				
Step 3	<p>Find the y-intercept. Write the answer as an ordered pair</p> <p>Find the x-intercept(s). Write the answer as an ordered pair</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%; text-align: center;">y-intercept</th> <th style="width: 50%; text-align: center;">x-intercepts</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">$x = 0$</td> <td style="text-align: center;">$y = 0$</td> </tr> </tbody> </table> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> $y = x^2 - 5x - 6$ $y = 0^2 - 5x0 - 6$ $y = -6$ <p>\therefore y-intercept = (0,-6)</p> </div> <div style="width: 45%;"> $0 = x^2 - 5x - 6$ $x^2 - 5x - 6 = 0$ $(x - 6)(x + 1) = 0$ $x - 6 = 0 \text{ and } x + 1 = 0$ $x = 6 \text{ and } x = -1$ <p>\therefore x-intercepts are (6,0) and (-1,0)</p> </div> </div>	y-intercept	x-intercepts	$x = 0$	$y = 0$
y-intercept	x-intercepts					
$x = 0$	$y = 0$					
Step 4	<p>Find the coordinates of the turning point.</p> <p>Indicate:</p> <ul style="list-style-type: none"> ➤ For the x co-ordinate of the turning point, find the mid point of the x intercepts. 	$x = \frac{6 + -1}{2}$ $x = \frac{5}{2}$ $x = 2 \frac{1}{2}$				





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Best Practice #1

