

**SUVA SANGAM COLLEGE**  
**YEAR 11**  
**APPLIED MATHEMATICS**  
**WORKSHEET 9**

Strand	Graphs
Sub-Strand	Graphs
Content Learning Outcome	To solve equation simultaneously
Reference from Text	Pg 84

**Questions**

	<p><b>CONCEPT IN BRIEF:</b>  <b>Elimination Method</b>          In this method a multiple of one equation is added to a multiple of the second equation to eliminate a variable. Either <math>x</math> or <math>y</math> can be eliminated.  <b>Steps</b>          1. One variable is selected and each equation is multiplied by some number to equate the term with this variable.          2. The two equations are added or subtracted to eliminate this variable.          3. The remaining equation is solved.          4. The result is used to solve for the other variable.</p>
1.	Solve $2x - 5y = 1$ and $3x + 5y = 14$ simultaneously using elimination method.
	<p><b>CONCEPT IN BRIEF:</b>  <b>Method 2: Substitution method</b>  <b>Steps.</b>          1. Choose a variable and make it the subject of the formula in one of the equations.          2. Substitute this equation into the other equation and solve it.          3. Use the result to find the remaining variable.</p>
2.	Solve the equation simultaneously using substitution method. $x + 2y = 10$ and $3x - 2y = 14$
	<p><b>CONCEPT IN BRIEF:</b>  <b>Steps to sketch the graph.</b>          1. Write the coordinates of the vertex.          2. Give the equations for the axis of symmetry          3. Calculate the x intercept, let <math>y = 0</math>          4. Calculate the y intercept, let <math>x=0</math>          5. Sketch the graph</p>
3.	The equation is given as $y = (x - 1)^2 + 2$ . (a) Sketch the graph. Clearly show the intercepts (b) Give the coordinates of the vertex