SUVA SANGAM COLLEGE

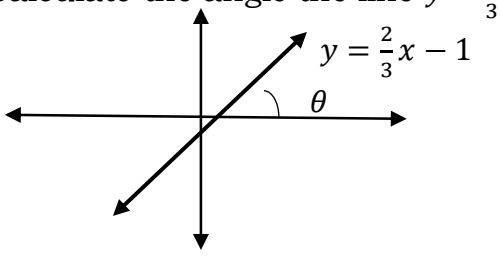
YEAR 12

MATHEMATICS

WORKSHEET 7

Strand 4	**Coordinate Geometry**
Sub-Strand	**12.4.1 Applications of coordinate geometry**
Content Learning Outcome	Explore and apply the concepts of coordinate geometry • Calculate distance, midpoint and gradient • Determine the relationship between gradient of a line and the angle it makes with the positive x – axis. • Determine the equation of a line.
Reference from Text	Pg. 125 to 133

Questions

No.	
	CONCEPT IN BRIEF: 1. $d = \sqrt{(x_2-x_1)^2 + (y_2-y_1)^2}$ 2. $Mid\ point\ = \left(\frac{x_1+x_2,}{2}, \frac{y_1+y_2,}{2}\right)$
1.	A diameter intersects the circumference of a circle at the points (-2,6) and (6,2). Find the a) length of the diameter b) length of the radius c) coordinates of the center of the circle.
	CONCEPT IN BRIEF: 1. $m = tan\theta$
2.	Calculate the angle the line $y = \frac{2}{3}x - 1$ makes with the positive $x - axis$. 
	CONCEPT IN BRIEF: 1. $m = \frac{y_2-y_1}{x_2-x_1}$ 2. Equation of the line through $(x_1, x_2)\ and\ (y_1, y_2)\ \ is\ \ y - y_1 = m(x - x_1)$
3.	A line passes through the points $(5,1) and (3,-2)$. a) Calculate the gradient of this line. b) Determine the equation of the line in the form $y = mx + c$