SUVA SANGAM COLLEGE

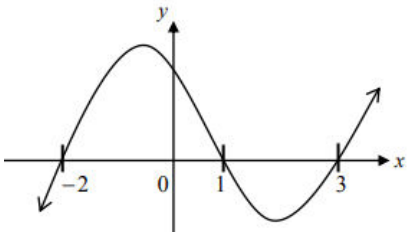
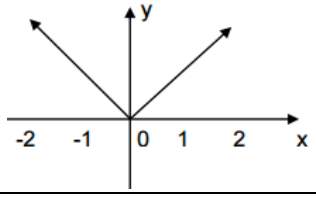
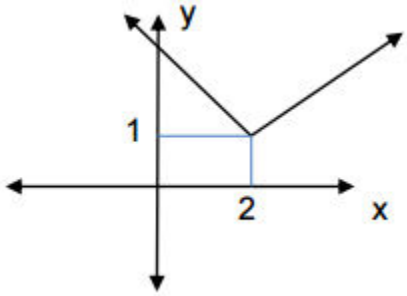
YEAR 12

MATHEMATICS

WORKSHEET 10

Strand 5	**12.3 Graphs**
Sub-Strand	**12.3.1 Graphs and intersection**
Content Learning Outcome	Study and Interpret graphs
Reference from Text	Pg. 87 to 114

Questions

No.	**CONCEPT IN BRIEF**: General form $y = (x \pm a)(x \pm b)(x \pm c)$
1.	A cubic function is shown below  Write the equation of the graph in factorized form.
	CONCEPT IN BRIEF: General form $y = \|x\|$ 
2.	The graph of the function is shown below.  State the Domain and the Range.

	CONCEPT IN BRIEF: General form $y = \frac{ax \pm b}{cx \pm d}$ i. Calculate the x intercept, let $\boldsymbol{y = 0}$ or make the **numerator = 0** ii. Calculate the y intercept, let $\boldsymbol{x = 0}$. iii. Vertical asymptote- let the denominator = 0 **i.e.** $\boldsymbol{cx + d = 0}$ iv. Horizontal asymptote- divide the coefficients of the variable. i.e. $\boldsymbol{\frac{ax}{cx}}$**.**
3.	Consider the function $y=\frac{x-3}{x+1}$ i. Find the ***x*-intercept**. ii. Find the ***y*-intercept**. iii. State the equation of the **vertical** asymptote. iv. State the equation of the **horizontal** asymptote. v. Hence, sketch the **graph** of this function.