

**SUVA SANGAM COLLEGE**

**YEAR 11**

**APPLIED MATHEMATICS**

**WORKSHEET 5**

Strand	Algebra
Sub-Strand	Equations and In equations
Content Learning Outcome	To solve linear equation, quadratic and cubic function in factored form
Reference from Text	Pg 44 - 49

**Questions**

	<p><b>CONCEPT IN BRIEF:</b></p> <p>To solve linear equations:</p> <ul style="list-style-type: none"><li>➤ Remove brackets</li><li>➤ Collect like terms</li><li>➤ Solve for the unknown by carrying out opposite operation.</li></ul>
1.	<p>Solve the following equations:</p> <p>(a) <math>2(x - 3) = x + 4</math></p> <p>(b) <math>\frac{4(x+3)}{3} = 2(x - 1)</math></p>
	<p><b>CONCEPT IN BRIEF:</b></p> <p>To solve quadratic equations:</p> <ul style="list-style-type: none"><li>➤ Factorise if it is not in factored form</li><li>➤ Solve using the <b>Null Factor Law</b></li></ul> <p><i>i.e If <math>A \times B = 0</math>, then either <math>A = 0</math> or <math>B = 0</math> or both <math>A</math> and <math>B = 0</math></i></p>
2.	<p>Solve the following equations:</p> <p>(a) <math>x^2 - 4 = 0</math></p> <p>(b) <math>x^2 - 3x = 0</math></p>
	<p><b>CONCEPT IN BRIEF:</b></p> <p>To solve cubic function in factored form, use the <b>Null Factor Law</b>.</p>
3.	<p>Solve the following equations:</p> <p>(a) <math>(x - 3)(2x - 4)(x + 1) = 0</math></p> <p>(b) <math>x(x + 5)(3x - 6) = 0</math></p>

**SUVA SANGAM COLLEGE**  
**YEAR 11**  
**MATHEMATICS LIFE SKILLS**  
**WORKSHEET 5**

Strand 1	Social Mathematics
Sub-Strand	1.3 Explore different payroll deductions
Content Learning Outcome	State the purpose of income tax. Calculate PAYE tax Calculate net pay

**Questions**

<b>No.</b>	<p><b>CONCEPT IN BRIEF:</b>  The income tax threshold for resident individuals is FJ\$30,000 with effect from 1 August, 2017.  There are separate rates of income tax for resident and non-resident individuals  The Pay As You Earn (PAYE) system is a method of paying income tax and national insurance contributions. Your employer deducts tax contributions from your wages or salaries</p>
1.	Mr. Seru's is resident of Fiji and is a Pharmacist and his chargeable income is \$55,500. Using the resident table calculate his normal tax
	<p><b>CONCEPT IN BRIEF:</b>  1.choose the row in which Mr. Seru's income falls  2.Find the excess over \$50,000  3.Find 20% of excess over \$50000.  4.Find \$3,600 + 20% of excess over \$50,000</p>
2.	Mr. Parvesh Kumar's chargeable income is \$78,435.00. Calculate his normal tax.
3.	Mrs. Kay's chargeable income is \$44,400.00 and is a Fijian resident. Calculate her normal tax.