

Learning Math With Mister Tan
FinLit4Teens
Theme: Retirement Planning

Name: _____

Class: _____

Module 4: Fundamentals of Investment

In module 3, we learned that inflation affects our purchasing power. To beat inflation, we need to grow our money. Let us investigate one of the ways of growing money: Investment.

Activity 1: Understanding Types of Investments

Instruction: Research online (e.g. <https://www.investopedia.com/>) to understand each of the following types of investments.

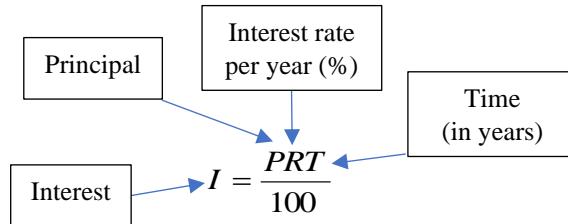
Bonds *Unit Trust* *Stocks*

The table below shows some of the ways to invest. Fill in the column using each of the words in italics above for *Types of Investment* to match the descriptions.

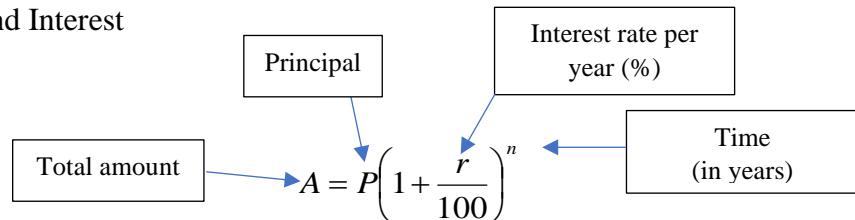
Types of Investments	Description	Risk Profile	Advantages	Disadvantages
	You loan the money to government or corporation with a set interest rate and maturity date	Often lower risk. However, it depends on ability of issuer to repay the loan and interest rate as well as opportunity cost	<ul style="list-style-type: none"> • Generally more stable • Generally higher rate than a bank saving account 	<ul style="list-style-type: none"> • Possible to get a higher yield in stocks • Cashing in before maturity could lead to a loss of principal
	Fund managed by a company which includes a portfolio of stocks or bonds	Depends on the type of fund	<ul style="list-style-type: none"> • Generally achieving diversification • Can choose level of risk 	<ul style="list-style-type: none"> • Returns not guaranteed • Management fees might be high
	Partial ownership of a company	Varies. Some can be very risky and is subjected to market fluctuations	<ul style="list-style-type: none"> • Potentially higher returns 	<ul style="list-style-type: none"> • Unpredictable due to market conditions • Picking counters may require a lot of due diligence and time • No guaranteed returns with possibility of losing most of your principal

Recap From Module 3: Simple Interest and Compound Interest

- Simple Interest



- Compound Interest



$$I = A - P$$

Activity 2: How Does Each Type of Investment Grow Your Money?

Investment	Principal	Average Interest Rate (Per Year)	Time (Years)	Interest Type	Interest	Total Amount
Bond	10000	2%	20	Simple		
Stocks	10000	4%	20	Compound		
Unit Trust	10000	5%	20	Compound		

Does higher return mean it is better? Explain your answer.

State one assumption made in the calculations above.

Marcus receives \$5000 from his parents. Rather than spending it, he decides to invest the money. He sets financial goal of growing the money to \$12000 in 20 years. State and explain which type of investment should Marcus choose.

Achievement Rubrics (20 points)

Assessing teacher to put a tick in the column on the right where applicable for each of the 3 domains and sum up the points in the row for total.

Domain	Observable Qualities	Tick
Domain 1: Work Completion (12 points)	Level 5: The student completed all tables and open-ended questions. (12 points)	
	Level 4: The student completed $\frac{3}{4}$ of the worksheet or more (but not all). (9 points)	
	Level 3: The student completed $\frac{1}{2}$ to $\frac{3}{4}$ of the worksheet. (6 points)	
	Level 2: The student completed $\frac{1}{2}$ or less of the worksheet. (3 points)	
	Level 1: Not attempted. (0 points)	
Domain 2: Mathematical Clarity (6 points)	Level 3: The student shows all workings. (6 points)	
	Level 2: The student shows partial workings. (3 points)	
	Level 1: Not attempted. (0 points)	
Domain 3: Effort and Neatness (2 points)	Level 3: Very good presentation and/or effort. (2 points)	
	Level 2: Somewhat good presentation and/or effort. (1 points)	
	Level 1: Very messy presentation and/or lack of effort. (0 points)	
Total Marks		