

Introduction: "In This Unit, ..."

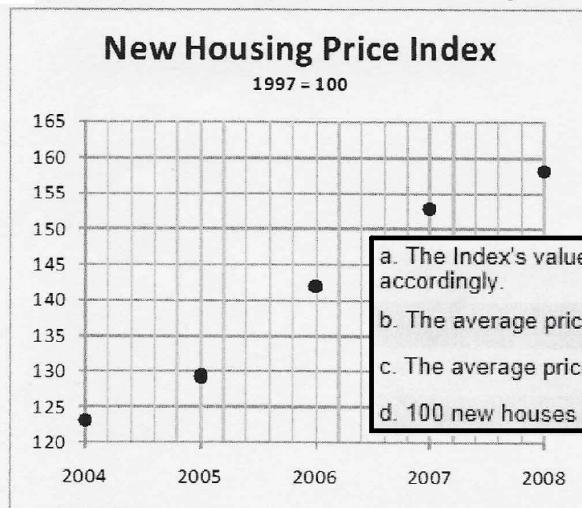
"Many Canadians have little or no savings when they retire; for many people, their only asset is their home. Only a small percent of Canadians retire with sufficient income to enjoy a comfortable lifestyle that includes travelling. Others are dependent on federal pensions or similar assistance to make ends meet. In this [unit] you will learn how you can attain greater financial independence." *-Foundations for College Mathematics, MHR, p398*



Statistical Indices

Checking Your Understanding

The graph shown displays the New Housing Price Index for Canada from 2004 to 2008.



- The Index's value for 1997 was set to 100 and all other values were scaled accordingly.
- The average price of a new house in 1997 was \$100.
- The average price of a new house in 1997 was \$100 000.
- 100 new houses were sold in 1997.

1

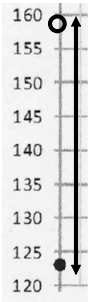
2

What was the % increase in the Index from 2004 to 2008?

3

If the cost to build Mr. Stewart's home in 2004 was \$170 000, what would it cost him in 2008 to have built the same home?

2 What was the % increase in the Index from 2004 to 2008?



3 If the cost to build Mr. Stewart's home in 2004 was \$170 000, what would it cost him in 2008 to have built the same home?

Getting Ready for Finance

-Part 1-

Learning Goal

Minds on Math

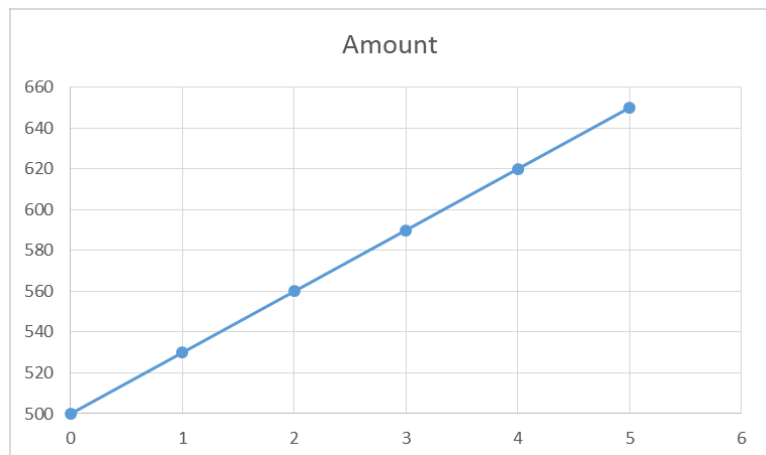
Mr. Stewart invests \$500 over 5 years

Consider the graphs (and tables) on the next slide. Each defines a specific investment strategy for the \$500.

- Describe the trends in each of the graphs.
- At what rate is each of the strategies growing?
- Which strategy would you choose? Why?

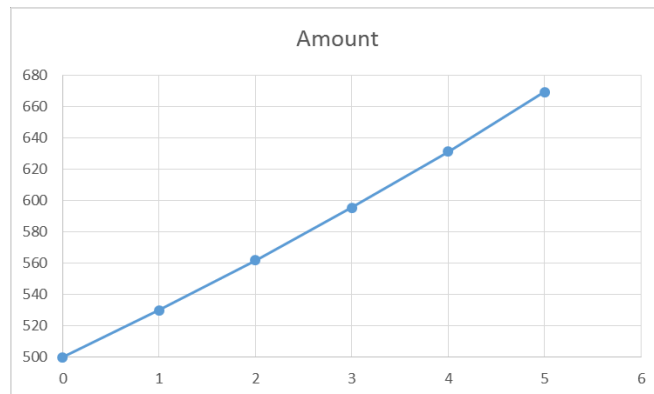
Strategy 1:

Year	Amount (\$)
0	500
1	530
2	560
3	590
4	620
5	650



Strategy 2:

Year	Amount (\$)
0	500
1	530
2	561.80
3	595.51
4	631.24
5	669.11



Putting it Together

Strategy 1:

- linear
- constant rate of change
(change is additive)
- investment earns "simple interest"
- Definition: \$ paid on a loan or investment; a % of the principal, P (initial value)
- Formulas:
 - > Interest, $I = Prt$
 - > Amount, $A = P + Prt$OR $A = P(1 + rt)$

Strategy 2:

- non-linear
- rate of change increasing
(% change in differences)
- investment earns "compound interest"
- Definition: interest paid on the P and its accumulated interest
- Formulas:
 - > Amount, $A = P(1 + i)^n$
 - > Interest, $I = A - P$

Simple Interest

- Formulas:
 - > Interest, $I = Prt$
 - > Amount, $A = P + Prt$
- OR $A = P(1 + rt)$

P = Principal, initial value

A = Amount (P + Interest)

r = annual rate of interest
as a decimal

t = time in years

Compound Interest

- Formulas:
 - > Amount, $A = P(1 + i)^n$
 - > Interest, $I = A - P$
 - > Gr 12: $FV = PV(1 + i)^n$

i = annual rate of interest
as a decimal per interest
period

n = the number of
interest periods

FV = Future Value

PV = Present Value