Math 1030 #9b

Future Value

Total Return

Savings Plans and Investments

Total and Annual Return

Annual Return

Investments

<u>Total Return</u> -- the relative change in the investment value over a
period of time.

$$\text{total return} = \frac{\text{new value - starting principal}}{\text{starting principal}}$$

$$= \frac{A - P}{P}$$

<u>Annual Return</u> -- the average annual rate at which your money grew
over a period of time.

$$\text{annual return} = \left(\frac{A}{P}\right)^{(1/Y)} - 1$$

EX 1: Three years after buying 20 shares of XYZ stock for $25 per
share, you sell the stock for $8500. Find the total and annual
return on this investment.

Types of Investments

1) Stocks - gives you a share of ownership in a company. The
   only way to get money from a stock is to sell.

2) Bonds - a promise of future cash. The issuer pays simple interest
   and promises to pay the principal by some later date.

3) Cash - money deposited in bank accounts, CDs and U.S.
   Treasury Bills

Things to consider when investing

1) Liquidity - How easy is it to get to your money?

2) Risk - Is the principal invested at risk?

3) Return - How much return (total or annual) do you expect to earn?

EX 2: Which investment in 1900 would have been worth more
       at the end of 2008?

    a) $10 in stocks

    b) $75 in bonds

    c) $500 in cash

Historical Returns
1900-2008

Category	Average Annual Return
Stocks	6.0%
Bonds	2.1%
Cash	1.0%