

M105 Station Math Renew

$$A = PMT \left[\frac{(1 + \frac{r}{n})^{n \cdot t} - 1}{\frac{r}{n}} \right]$$

Name: _____

$\frac{r}{n}$ Date: _____

Unit 4C Test 1

Station 1 i 2

Suppose you set up a new IRA (individual retirement account) that pays an APR of 5.1%, compounded monthly. If you contribute \$150 per month for 15 years, how much will the IRA contain at the end of that time?

$$A = PMT \left[\frac{(1 + \frac{r}{n})^{nt} - 1}{\frac{r}{n}} \right]$$

A = What you're looking for = _____
 PMT = _____ n = _____ t = _____

$\frac{r}{n}$

Station 3 i 4

Brandi deposits \$75 at the end of each month into an account with an APR of 7% for 10 years. (Assume that the payment period is the same as the compounding period.) How much will the account contain at the end of the period? How much did Brandi deposit?

Pmt = _____ r = _____ t = _____ n = 12 A = 15 what you're looking for

Station 5 i 6

Suppose you want your son's college fund to contain \$150,000 after 15 years. If you can get an APR of 4.3%, compounded monthly, how much should you deposit at the end of each month?

A = _____ t = _____ r = _____ n = 12 pmt = 15 what you're looking for

Station 7 i 8

Suppose you have 18 months in which to save \$2900 for a vacation cruise. If you can earn an APR of 2.3%, compounded monthly, how much should you deposit at the end of each month?

A = _____ t = _____ r = _____ n = 12 pmt = 15 what you're looking for

Unit 4C Test 1 (continued)

find A First
live on Interest

Name: _____

So 4.39% of A will be 52,000

STATION
A & B

Suppose that you are 25 years old now, and you would like to retire at the age of 55. Furthermore, you would like to have a retirement fund from which you can draw an income of \$52,000 per year—forever! You plan to reach this goal by making monthly deposits into an investment plan. How much do you need to deposit each month? Assume an APR of 4.3%, both as you pay into the retirement fund and when you collect from it later.

$$A = \text{PMT} \left[\frac{(1 + \frac{r}{n})^{nt} - 1}{\frac{r}{n}} \right]$$

STATION

C & D

Total Return = $\frac{A - P}{P}$
then
make a %

Four years after paying \$3500 for some shares of a risky stock, you sell the shares for \$5000. Find the total and annual return (to the nearest hundredth of a percent) on your investment.

$$\text{Annual Return} = \left(\frac{A}{P} \right)^{\frac{1}{t}} - 1$$

STATION

E & F

earnings per share = $\frac{\text{Share price}}{\text{P/E ratio}}$

Johnson and Johnson closed at \$145.76 with a P/E ratio of 25.33. What were the earnings per share for Johnson and Johnson?

Station

G & H

Calculate the current yield on a \$10,000 Treasury bond with a coupon rate of 8% that has a market value of \$9200.

$$\text{Current yield} = \frac{\text{annual interest payment}}{\text{Current price of bond}}$$

FYI
Bond prices are usually quoted in points, which means percentage of face value
Ex bond face value of 1000 closed w/ 102 points is selling 102% · 1000 = 1020