

HOMEWORK: Review questions...

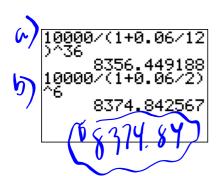
QUESTIONS???

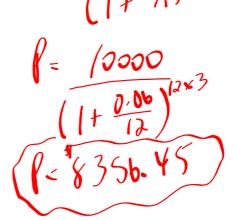
- 2. a) For how long would \$6000 need to be invested, at 6.4% simple interest, to earn \$1200 in interest?
 - **b**) How long would it take if the interest for part a) was paid yearly?
 - c) How long would it take if the interest was paid quarterly?

a)
$$t = ?$$
 $t = \frac{1200}{6000000000}$
 $t = 3.125 years$

b) $3.25 years$

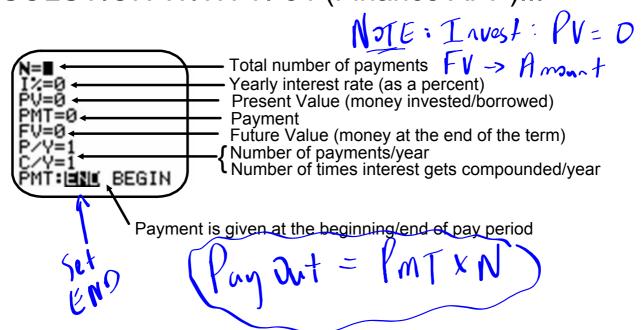
- 7. a) How much should Desiree invest at 6%, compounded monthly, to have \$10 000 in 3 years?
 - b) How much should Desiree invest if the compounding period is semi-annual?





10. An investment of \$250 grew to \$1000 at 6% interest, compounded semi-annually. Estimate how long it took for the investment to grow, and then verify your estimate.

SOLUTION WITH TI-84 (Finance APP)...



p. 485

Determining the future value of an investment involving regular deposits

Darva is saving for a trip to Australia in 5 years. She plans to work on a student visa while she is there, so she needs only enough money for a return flight and her expenses until she finds a job. She deposits \$500 into her savings account at the end of each 6-month period from what she earns as a server. The account earns 3.8%, compounded semi-annually. How much money will be in the account at the end of 5 years? How much of this money will be earned interest?



SOLUTION WITH TVM-Solver...

N=10 1½=3.8 PV=0 PMT=-500 •FV=5449.896878⁴ P/Y=2 C/Y=2 PMT:□NU BEGIN

5449. 90 5449. 90 - 500 (10) 5449. 90 - 500 (10) SOLUTION by hand...

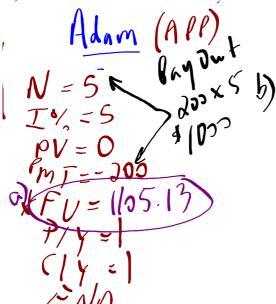
Comparing a regular payment investment with a single payment investment

Adam made a \$200 payment at the end of each year into an investment that earned 5%, compounded annually. Blake made a single investment at 5%, compounded annually. At the end of 5 years, their future values were equal.

a) What was their future value?

b) What principal amount did Blake invest 5 years ago?

c) Who earned more interest? Why?



Blake (Formula)

P = A

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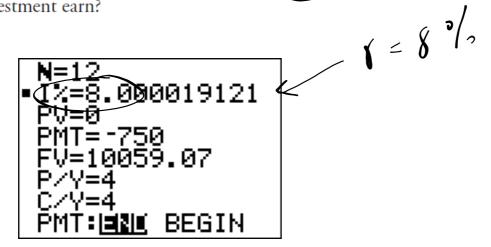
- (105.13)

Determining the interest rate of a regular payment investment

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Jeremiah deposits \$750 into an investment account at the end of every 3 months. Interest is compounded quarterly, the term is 3 years, and the future value is \$10 059.07. What annual rate of interest does Jeremiah's investment earn?

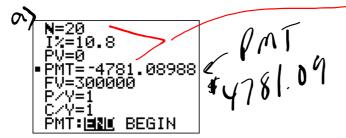


Determining the regular payment amount p. 490 of an investment

Celia wants to have \$300 000 in 20 years so that she can retire. Celia has found a trust account that earns a fixed rate of 10.8%, compounded annually.

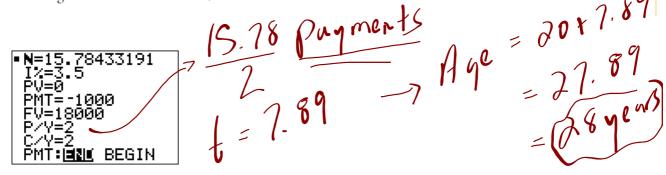
a) What regular payments must Celia make at the end of each year to meet her goal of \$300 000?

b) How much interest will she earn over the 20 years?



Determining the term of a regular payment p. 491 investment

On Luis's 20th birthday, he started making regular \$1000 payments into an investment account at the end of every 6 months. He wants to save for a down payment on a home. His investment earns 3.5%, compounded semi-annually. At what age will he have more than \$18 000?



Untitled.notebook December 06, 2017

HOMEWORK...

p. 493: #3, 5, 6, & 9

NOTE: When using the TI-84...

Each question must have the following completed for homework AND beginning of class tomorrow you will be given time to solve.

