

QUIZ No. 1
06/05/08

DO YOUR WORK ON THIS HANDOUT. THIS WILL EXPEDITE THE GRADING OF THE PAPERS.

NAME _____

QUIZ SCORE _____

Read these instructions!!

Please read the problems carefully and provide the information requested and only the information requested in each question. Use the minimum amount of work required to answer each question. Show all your work. The test is worth 10 points. (about 10% of your total grade).

The test papers are to be handed in no later than 4:00 P.M. or 60 minutes after we start, whichever is later. It is unfair to your fellow students who hand in their papers on time to use more time than they had.

The test is open notes and open book. Use your calculator or laptop if needed, but be sure to explain what you did.

If you want to ask a question, come to me and ask me. **However, given the short length of the test you are better off making and stating an assumption instead.** If you want to borrow your neighbor's calculator, ask me to do it for you. No talking to your neighbors.

Move on to the next problem if you are stuck.

Good luck, I hope you all do well.

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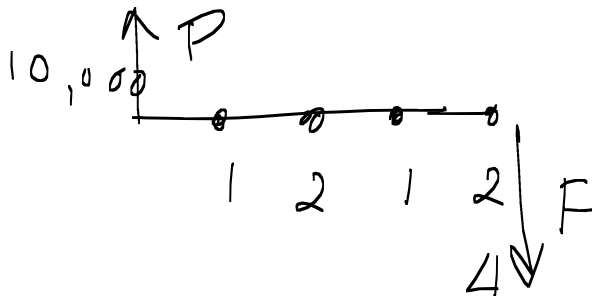
Problem No. 1 Short answer questions, but you must show your work or explain how you got the answer. (1.3 points each = 7.8 points)

- a) We have the following facts about a small company: P/E ratio = 22. The annual earnings of the company are \$200,000. Total number of shares outstanding = 1,800,000. Book Value per share \$48. For how much is a share of the stock of this company selling?

$$\frac{P}{E} = 22 \quad P = 22E \quad E = \frac{200,000}{1,800,000}$$

$$= 22(0.111) = \$2.44$$

- b) Your parents have loaned you \$10,000 for your last two years in college. You are expected to pay it back in a lump sum two years after you graduate, with 4% annual compounded interest. How much will you owe them 4 years from now?



$$F = P(F/P, 4\%, 4)$$

$$= 10,000(1.1699)$$

$$= 11,699$$

- c) You bought a car for \$30,000. You made a down payment of \$6,000, leaving you to have to borrow the remainder at 6% annual interest (=0.5%/month) over 48 month. How much is your monthly payment?

$$\uparrow 30,000 - 6,000 = P$$

$$A = P(A/P, 0.5\%, 48)$$

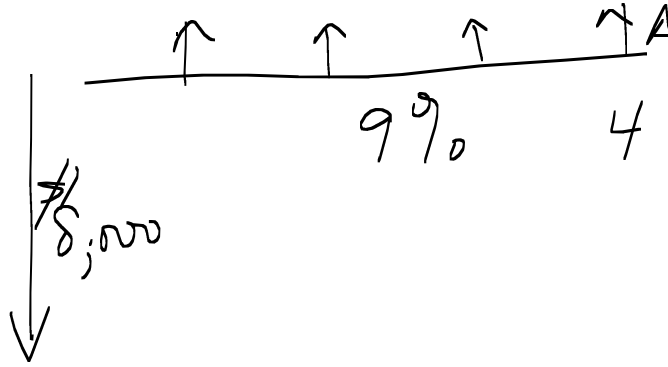
$$= 24,000(0.0235)$$

$$= \$564.00$$

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Problem No. 2

A small business owner decided to buy a new computerized inventory system. The system is Mac based and has a number of wireless barcode readers. The cost of the system was \$8,000. Suppose that she can save an average of \$0.005 on every transaction. About how many daily transactions did she assume when she calculated that she would get her money back in 4 years? Assume that the prevailing annual interest rate is 9% and that all compounding is monthly (0.75%). (Assume 25 business days per month) (2.2 points)



$$\Rightarrow n = 12 \times 4 = 48$$

$$A = 8000 \left(\frac{P}{A}; 7.5\%, 48 \right)$$

$$A = 8000 (0.0249)$$

$$= 199.20$$

$$25 \times (0.005) = 199.20$$

$$x = \frac{199.20}{25 \times 0.005} = 1593$$