

Homework Problems for Finance Formulas - Set 1 (Formulas 1-4 on the Formulas Handout)

Sample Problem Suggestions: To get the best use of these problems in studying for the exam, I would suggest the following method:

- 1) Do the problem.
- 2) Compare your answer with the correct answer (at the end of the document). If they are the same, do another problem! If they differ, do the problem again and compare your answer again. If they still differ, get the study problems with the solutions worked out and compare those solutions carefully to your written solution. If you can't find where you are doing something wrong, get help from a tutor or email me with the problem number and your answer.

Sample Problems for Formulas 1, 2, and 3 (problems 15-18 are formula 4).

Problem 1. Suppose you invest \$7,500 into an account earning 2.5% annual interest compounded continuously. How much will be in the account after 5 years?

Problem 2. Suppose you invest \$5,000 into an account earning 15% annual interest compounded daily. How much will be in the account after 5 years?

Problem 3. Suppose you invest \$8,000 into an account earning 16.5% annual interest compounded continuously. How much will be in the account after 10 years?

Problem 4. Suppose you invest \$500 into an account earning 3% annual interest compounded quarterly. How much will be in the account after 10 years?

Problem 5. Suppose you invest \$3,000 into an account earning 7% annual interest compounded continuously. How much will be in the account after 10 years?

Problem 6. Suppose you invest \$7,500 into an account earning 8.5% annual interest compounded monthly. How much will be in the account after 10 years?

Problem 7. Suppose you invest \$3,000 into an account earning 10.5% annual interest compounded continuously. How much will be in the account after 5 years?

Problem 8. Suppose you invest \$9,500 into an account earning 6% annual interest compounded semi-annually. How much will be in the account after 5 years?

Problem 9. Suppose you invest \$5,500 into an account earning 7% annual interest compounded continuously. How much will be in the account after 19 years?

Problem 10. Suppose you invest \$6,000 into an account earning 9.5% annual interest compounded annually. How much will be in the account after 19 years?

Problem 11. Suppose you pay \$100 into a retirement account earning 2.5% annual interest at the beginning of every month for 25 years. How much will you have at the end of that time?

Problem 12. Suppose you pay \$150 into a retirement account earning 2.5% annual interest at the beginning of every month for 25 years. How much will you have at the end of that time?

Problem 13. Suppose you pay \$150 into a retirement account earning 2.7% annual interest at the beginning of every month for 25 years. How much will you have at the end of that time?

Problem 14. Suppose you pay \$220 into a retirement account earning 1.7% annual interest at the beginning of every month for 35 years. How much will you have at the end of that time?

Problem 15. Suppose you borrow \$175,000 at 6.3% for 30 years (monthly payments). What will your payments be? How much interest will you pay on this loan?

Problem 16. Suppose you borrow \$175,000 at 6.3% for 12 years (monthly payments). What will your payments be? How much interest will you pay on this loan?

Problem 17. Suppose you borrow \$275,000 at 3.4% for 30 years (monthly payments). What will your payments be? How much interest will you pay on this loan?

Problem 18. Suppose you borrow \$275,000 at 3.1% for 15 years (monthly payments). What will your payments be? How much interest will you pay on this loan?

Answers:

Problem 1: Answer: \$ 8,498.61	Problem 11: Answer: \$ 41,704.23
Problem 2: Answer: \$ 10,583.35	Problem 12: Answer: \$ 62,556.34
Problem 3: Answer: \$ 41,655.84	Problem 13: Answer: \$ 64,314.00
Problem 4: Answer: \$ 674.17	Problem 14: Answer: \$ 126,319.10
Problem 5: Answer: \$ 6,041.26	Problem 15: Answer: \$ 1,083.20 pmnt, \$ 214,952.00 int
Problem 6: Answer: \$ 17,494.85	Problem 16: Answer: \$ 1,735.03 pmnt, \$ 74,844.32 int
Problem 7: Answer: \$ 5,071.38	Problem 17: Answer: \$ 1,219.57 pmnt, \$ 164,045.20 int
Problem 8: Answer: \$ 12,767.21	Problem 18: Answer: \$ 1,912.35 pmnt, \$ 69,223.00 int
Problem 9: Answer: \$ 20,795.74	
Problem 10: Answer: \$ 33,652.67	