

Exam 3

1) Use the table below for problem 1.

Marginal Tax Rate	Single	Married Filing Jointly or Qualified Widow(er)
10%	\$0 – \$8,450	\$0 – \$17,850
15%	\$8,451 – \$34,850	\$17,851 – \$72,500
25%	\$34,851 – \$89,230	\$72,501 – \$146,400
28%	\$89,231 – \$183,250	\$146,401 – \$223,050
33%	\$183,251 – \$398,350	\$223,051 – \$398,350
35%	\$398,351 – \$400,000	\$398,351 – \$450,000
39.6%	\$400,001+	\$450,001+

a) (4 points) Suppose Amber is a single woman who has a taxable income of \$94,000 per year. Use the table above to calculate Amber's Federal taxes for the year. Show all work/calculations.

b) (1 point) What is Amber's effective tax rate?

2) (5 points) Bob invests \$280 per month into an account that gives 4.2% annual interest, how much will Bob have in the account after 25 years? Solve the problem by hand using the appropriate formula, and show all work.

3) (5 points) I invest a large sum of money into an account that gives 6.1% annual interest compounded monthly. I leave the money in the account for 30 years. At the end of the 30 years I now have \$720,600. How much did I originally invest? Solve the problem by hand using the appropriate formula, and show all work.

4) I find a house that is selling for \$295,000. The bank offers me a 3.9% APR for the 30-year loan.

a) (3 points) How much will my mortgage payment be each month? Solve the problem by hand using the appropriate formula, and show all work.

b) (2 points) If the house also has \$14,000 of property taxes each year, then how much will I need to budget for the mortgage + property taxes each month? Show all work.

(more on next page)

5) (Excel problem) (5 points) Open Excel and fill in the cells with the necessary formulas in columns B, C, D to solve the problem posted below. I should be able to find your final answer at the end of column D in your file.

	A	B	C	D	E	F
1	You invest \$20,000 in an account that offers 4.1% APR compounded monthly. You leave the money in the account for 30 years. How much would you have after 30 years? Create Excel formulas to fill in columns B, C, D					
2						
3						
4						
5						
6						
		amount	interest	amount		
10	months	to start	added	at end of month		
11	0					
12	1					
13	2					
14	3					
15	4					
16	5					
17	6					
18	7					
19	8					
20	9					

6) (Excel problem) (5 points) In Excel, fill in the cells with the necessary formulas in columns B, C, D to solve the problem posted below. I should be able to find your final answer at the end of column D in your file.

	A	B	C	D
1	Problem 3: You save \$250 per month, 4.5% APR compounded monthly, save for 30 years			
2				
3	month	amount at beginning of month	apply interest	amount at end of month
4	1			
5	2			
6	3			
7	4			
8	5			
9	6			
10	7			
11	8			
12	9			
13	10			