

I. Simple Interest (Each blank in this section is worth 2 points.)

A. Fill in the following chart:

	<u>Principal</u>	<u>Simple Interest Rate</u>	<u>Time</u>	<u>Simple Interest Amount</u>	<u>Total Amount Owed</u>
1.)	\$1,200	8%	5 months	\$40	\$1240
2.)	\$3,000	9.5%	3 years	\$855	\$3855

B. Fill in the following chart using exact time - ordinary interest:

	<u>Principal (Amount Borrowed)</u>	<u>Simple Interest Rate</u>	<u>Interest Date Borrowed</u>	<u>Date Repaid</u>	<u>Exact Time</u>	<u>Interest Amount</u>	<u>Due</u>
1.)	\$2000	7%	Jan 8, 94	Feb 12, 94	35 days	\$13.61	\$2013.61
2.)	\$1800	3%	Sep 10, 94	Sep 20, 94	10 days	\$1.50	
	<u>\$1801.50</u>						

C. Fill in the chart using exact time - exact interest:

	<u>Principal</u>	<u>Simple Interest Rate</u>	<u>Interest Date Borrowed</u>	<u>Date Repaid</u>	<u>Exact Time</u>	<u>Interest Amount</u>	<u>Amount Due</u>
1.)	\$750	9%	Mar 8, 94	Mar 12, 94	4 days	\$0.74	\$750.74
2.)	\$500	4%	Dec 10, 94	Jan 6, 95	27 days	\$1.48	\$501.48

D. Complete the table:

	<u>Principal</u>	<u>Interest Rate</u>	<u>Time</u>	<u>Simple Interest Amount</u>
1.)	\$300	10%	3 years	\$90
2.)	\$7000	18%	6 years	\$7560
3.)	\$2000	4.5%	1.75 yrs or 1 yr. & 9 mos.	\$157.50

II. Compound Interest

1.) Without using a table figure out how much money you will have in 3 months if you deposit \$500 into a savings account that pays 3% interest compounded monthly. (6 points)

rate used: $3\%/12 = 1/4\% = .25\%$

$$500(.0025) = 1.25 \quad 500 + 1.25 = 501.25$$

$$501.25(.0025) = 1.25 \quad 501.25 + 1.25 = 502.50$$

$$502.50(.0025) = 1.26 \quad 502.50 + 1.26 = 503.76$$

2.) Use a table to find the future value of the following: (2 points each blank)

	<u>Principal</u>	<u>Interest Rate</u>	<u>Time</u>	<u>compounded</u>	<u>Rate</u>	<u># of Used</u>	<u>factor periods</u>	<u>Future used</u>
(a.)	\$6,000	8%	5 years	quarterly	2%	20	1.4854	\$8915.40
(b.)	\$6,000	12%	2 years	monthly	1%	24	1.2697	\$7618.20

3.) Use a table to find the present value of the following: (2 points each blank)

	<u>Principal</u> <u>Value</u>	<u>Interest</u> <u>Rate</u>	<u>Time</u>	<u>Rate</u> <u>compounded</u>	<u># of</u> <u>Used</u>	<u>factor</u> <u>periods used</u>	<u>Present</u>
(a.)	\$20,000 <u>\$13,434</u>	4%	10 years quarterly		<u>1%</u>	<u>40</u> <u>.6717</u>	
(b.)	\$20,000	4%	10 years semi-annually	<u>2%</u>	<u>20</u>	<u>.6730</u>	<u>\$13,460</u>

4.) If Kathy puts \$1000 into an account today and that account pays 6% interest compounded quarterly, how much will she have in her account five years from today if she doesn't make any withdrawals? (8 points)

future value rate used: $6\%/4 = 1.5\%$ # of periods: $5(4) = 20$ factor: 1.3469
 $\$1000(1.3469) = \1346.90

5.) Juanita received a large inheritance. She wants to blow some of the money and put the rest into an account that pays 8% interest compounded quarterly. How much should she put into the account if she plans to pay cash for a \$150,000 house in ten years? (8 points)

present value rate used: $8\%/4 = 2\%$ # of periods: 40 factor: .4529
 $\$150,000(.4529) = \$67,935$

6.) What is the effective rate or annual percentage yield of Karen's savings account if she puts \$2000 into an account that pays 8% compounded quarterly? (8 points)

rate used: 2% # of periods: 4 factor 1.0824 effective rate: $0.0824 = 8.24\%$