

Formulas: $A = P(1 + i)^n$ $A = P(1 + rt)$

Part I: Shade the letter of the correct answer on the scantron form provided. (10 Marks)

1. $A = 500(1.06)^5$ represents a bank loan that is compounded annually. What is the annual interest rate?

- A) 3% B) 5% C) 6% D) 12%

2. \$6500 was borrowed at an interest rate of 12% compounded semi-annually. If the loan is to be paid off as a single payment after five years, how much money must be repaid?

- A) \$8698.47 B) \$11,455.22 C) \$11640.51 D) \$20,188.01

3. A loan of \$2500 at simple interest of 7% annually must be repaid after 3 years. How much must be repaid?

- A) \$2675.00 B) \$3025.00 C) \$3062.61 D) \$8025.00

4. The chart below shows the payments made towards paying off a \$12,000 loan. How much of the third payment is interest paid toward the loan?

Payment Period (month)	Payment (\$)	Principal Paid (\$)	Balance (\$)
0			12,000
1	300	240.00	11,760.00
2	300	241.20	11,518.80
3	300	242.41	11,276.39

- A) \$57.59 B) \$58.80 C) \$60.00 D) \$176.39

5. How much interest must be paid on a loan of \$4300 at 10% compounded semi-annually for 4 years?

- A) \$926.68 B) \$1995.63 C) \$2053.06 D) \$4917.43

6. 72 quarterly payments are required to pay off a loan. How many years does this represent?

- A) 6 B) 12 C) 18 D) 24

7. Sam has a balance of \$1985 on his credit card. If the interest rate is 14.5% compounded monthly and he plans to pay off the balance in 18 months, what is his monthly payment?

- A) \$110.28 B) \$123.37 C) \$136.69 D) \$137.19

8. Which represents the lowest interest that would be paid?

	Interest rate	Compounded
A)	8%	Daily
B)	8%	Monthly
C)	15%	Daily
D)	15%	Monthly

9. A student repaid a total of \$2880.27 for a loan including the principal and interest. If the interest rate was 9% compounded monthly for 4 years, what was the principal amount of the loan, to the nearest dollar?

- A) \$2012 B) \$2040 C) \$2622 D) \$2795

10. If a loan is to be repaid in 5 years making bi-weekly payments, how many payments will be made?

- A) 60 B) 125 C) 130 D) 260

Part II: Show all workings in the space provided. You may need to use a financial APP to complete the workings for some questions. (15 Marks)

1. Susan wants to purchase a new couch and loveseat for \$1895.00 including taxes. If she puts it on a line of credit at 5% interest compounded semi-annually and pays it off in one payment at the end of 3 years, how much will she pay? How much of this payment is interest? (4 mks)

2. A house is purchased for \$300,000. Determine the monthly payment for each of the following options and calculate the total amount that would be repaid including interest at the end of the amortization period. Which is the best option to choose? (5 mks)

Option A:

2.5% interest compounded monthly
25 year amortization

Option B:

3.5% interest compounded monthly
20 year amortization

3. Kevin used his credit card to pay \$2544 for a holiday. The interest rate for the credit card is 18.75%, compounded daily. Kevin plans to make monthly payments of \$200.

a) When will Kevin have paid off the balance in full? (2 mks)

b) How much interest will he have paid? (1 mk)

4. Ken wants to remodel his basement and he wants to pay back no more than \$15,000. If he gets a low interest loan at 4.5% compounded monthly and plans to repay the loan in one payment in 2 years, how much can he borrow? (3 mks)