

Name: _____

Date: _____

7.2 Compound Interest

BLM 7-3

1. Complete the chart for a 10-year loan.

Annual Interest Rate	Frequency of Compounding	Interest Rate Per Compounding Period	Number of Compounding Periods
16%	quarterly		
8%		4.0%	
	semi-annually	4.5%	
12%		12.0%	
	monthly	2.0%	
		1.5%	120
	bi-weekly	0.5%	
7%	semi-annually		

2. Henry borrows \$4000 for 4 years at 8% per year, compounded annually. How much will Henry owe at the end of the 4 years?

3. For each compounding condition, calculate the interest earned over 5 years on an investment of \$10 000 paying interest at 9% annually.

- compounded annually
- compounded semi-annually
- compounded monthly
- compounded bi-weekly
- compounded daily

4. Lorenzo borrows \$25 000 to start a landscaping business. Lorenzo's plan is to pay the loan back in 5 years, at which time he will need to pay \$38 824.24. If interest is charged semi-annually, what annual rate of interest is he being charged?

5. Inderjot invests \$2500 in a bond that pays 4.5% per year, compounded monthly, for a period of 8 years. How much will the investment be worth at the end of the 8 years?

6. Rahel left a \$5000 investment for 3 years in an account that paid 4% per year, compounded semi-annually. She then moved the entire accumulated amount into a second investment plan that paid 6% per year, compounded monthly, for 5 years. At the end of this time, what was Rahel's investment worth?

7. Jeremiah's grandparents placed \$3000 into an account for him when he was born. The investment is to be paid out when he turns 25. The account pays an annual interest rate of 8%, compounded semi-annually. How much will be in the account on Jeremiah's 25th birthday?

8. How long will it take an investment of \$4000 to grow to \$10 000 if it is invested in an account that pays an annual interest rate of 15%, compounded annually?

9. On her 20th birthday, Jung deposited \$40 000 into an account that paid interest semi-annually. When she turned 55, she cashed in the investment and collected \$159 982.33. What rate of annual interest did Jung's investment pay?

