

Name: \_\_\_\_\_

Date: \_\_\_\_\_

1. Bank Loan: You borrow money from a recognized bank

\* car  
\* house

- the term will be fixed
- the rate will be fixed
- interest compounded monthly

- Amortization period

⇔ term - the length of time to pay off a loan

- To default is to

you have missed at least one payment on your loan

2. Line of credit

An account with a set limit to borrow

- works a lot like a credit card
- usually much lower interest rate
- no term
- need a good credit rating

- Overdraft protection

A method of protecting you from high fees if you spend more money than is in your chequing or savings account.

**Example** Joe takes out a loan for \$7800 at 4% interest for 5 years. What will their monthly payment be?  
 a. Calculate the total amount Joe will pay for the loan over the 4 years.

$P$       $r$       $t \leftarrow$  compounded monthly

$$A = P \left( 1 + \frac{r}{n} \right)^{nt}$$

$$= 7800 \left( 1 + \frac{0.04}{12} \right)^{12 \times 4}$$

$$= 7800 (1 + 0.0033)^{48}$$

$$= 7800 (1.0033)^{48}$$

$$= 7800 (1.17320)$$

$$A = \$9150.95$$

b. Calculate Joe's monthly payment.

$$5 \text{ years} \times \frac{12 \text{ months}}{\text{year}} = 60 \text{ months}$$

$$\frac{9150.95}{60} = \$152.52$$

**Example** Marie is buying a new snowmobile that costs \$11 500.00. They will take a loan from their bank at 4.75% for 4 years.

$r$       $t$  c. Calculate the total amount Marie will pay for the loan over the 4 years.

$P$

$$A = P \left( 1 + \frac{r}{n} \right)^{nt}$$

$$= 11500 \left( 1 + \frac{0.0475}{12} \right)^{12 \times 4}$$

$$= 11500 (1 + 0.00395)^{48}$$

$$= 11500 (1.00395)^{48}$$

$$= 11500 (1.2088)$$

$$= \$13901.16$$

d. Calculate Marie's monthly payment.

$$4 \text{ years} \times \frac{12 \text{ months}}{\text{year}} = 48$$

$$\frac{13901.16}{48} = \$289.61$$

1. Tim wants to buy a used car that costs \$3900.00. He can get a loan at 3.25% for 3 years from his bank.
  - a) What will his monthly payment be?
  
  
  
  
  
  
  
  
  
  
  - b) What is the total amount Tim will pay for the loan over the 3 years?
  
  
  
  
  
  
  
  
  
  
2. Alan wants to buy a customized mountain bike that costs \$3500. He has saved \$1200 toward the cost.
  - a) How much will Alan need to borrow from the bank to buy his bike?
  
  
  
  
  
  
  
  
  
  
  - b) Alan can get a loan at 5.5% for 2 years from his bank. What will his monthly payment be for this loan?
  
  
  
  
  
  
  
  
  
  
  - c) What is the total amount Alan will pay for the loan over the 2 years?
  
  
  
  
  
  
  
  
  
  
  - d) How much will Alan pay in total for his bike?

3. Bruce takes out a \$7300 loan and is offered two choices for repayment.

Option 1: 5.75% per year for 3 years

Option 2: 7.00% per year for 2 years

a) Calculate the monthly payment for each loan option.

b) What is the total cost for each loan option?

c) Which loan would you recommend Bruce choose? Explain your answer.