1. Mia is buying a used trailer for $5000 on credit. She plans to travel through the Rockies over the summer. She can afford payments of $200 each month and is considering these two options:
   - The dealership credit card at 15.8%, compounded daily, and an immediate rebate of 2.4% off her first purchase
   - A bank loan at 9.8%, compounded monthly

   a) How much would Mia end up paying, in total, with each option?
   b) How much interest would she pay for each option?
   c) How long will it take her to pay off the balance for each option?
   d) What should she use: the credit card or the bank loan? Why?

a) Dealership

2.4% of 5000

0.024 x 5000

$120 ← Discount

c) 29.67 months

N=29.66902249
I%=15.8
PV=4880
PMT=-200
FV=0
P/Y=12
C/Y=365
PMT:END BEGIN

200*29.67
5934

Paid

b) I = 5934 - 4880

I = $1054

d) BANK (BEST)

c) 28.08 months

N=28.07714984
I%=9.8
PV=5000
PMT=-200
FV=0
P/Y=12
C/Y=12
PMT:END BEGIN

200*28.08
5616

Paid

b) I = 5616 - 5000

I = $616

9.3 Solving Problems Involving Credit

line of credit

A pre-approved loan that offers immediate access to funds, up to a pre-defined limit, with a minimum monthly payment based on accumulated interest; a **secure line of credit** has a lower interest rate because it is guaranteed against the client's assets, usually property.

Bank of Canada prime rate

A value set by Canada's central bank, which other financial institutions use to set their interest rates.

APPLY the Math p. 543

EXAMPLE 1 Solving a credit problem that involves overall cost and number of payments

Meryl and Kyle are buying furniture worth $1075 on credit. They can make monthly payments of $75 and have two credit options. Which option should they choose? Explain.

Option A: The furniture store credit card, which is offering a $100 rebate off the purchase price and an interest rate of 18.7%, compounded daily

Option B: A new bank credit card, which has an interest rate of 15.4%, compounded daily, but no interest for the first year

A//

```
N=14.65424521
I%=18.7
PV=975
PMT=-75
FV=0
P/Y=12
C/Y=365
PMT:END BEGIN
```

14.65 months

```
75*14.65
          1098.75
```

Pay

B//

```
12*75
        900
```

1st year pay

+12 months

```
N=2.384473095
I%=15.4
PV=175
PMT=-75
FV=0
P/Y=12
C/Y=365
PMT:END BEGIN
```

```
2.38*75
          178.5
Ans+900
         1078.5
```

Pay

BEST

- no interest/year
- less interest (3.50)
- less tax
- better rate

In Summary

Key Ideas

- Forms of credit that can be used to make purchases or acquire cash include bank loans, lines of credit, credit cards, payday loans, and dealership or in-store financing.
- There are many factors that determine the best credit option, such as the interest charged, the total payment, the amount of each payment, and the length of time it takes to pay off the loan. All of these factors must be considered carefully before making a decision.

Need to Know

- Credit cards have a credit limit, which is the maximum amount you can borrow. The credit limit varies from person to person, based on credit history.
- Cash advances on credit cards have no period in which no interest is charged and sometimes have a greater interest rate than purchases.
- A line of credit has a lower interest rate than most loans and credit cards. Because of this, a line of credit can be useful for consolidating debt.
- As with a credit card, a line of credit allows for flexibility in how the loan is paid back, as long as the minimum payment is made. The minimum payment is often based on the accumulated interest each month.
- Credit that is offered in conjunction with a special offer or promotion must be considered very carefully. There may be conditions for how the loan is paid back, which may result in unexpected costs or penalties.
- Payday loans must also be considered carefully, since the fee for borrowing is often high.
- An amortization table is particularly useful when you need to know interim values and when payment amounts or interest rates vary throughout the term of a loan.

HOMEWORK...

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1, 2, 3