Grab a calculator & finish

Use the TVM-Solver for each of the following...

p. 538: #1 - 4

NOTE: Have screenshots ready if not done!

Cash Rebate - $ given back at the end of fixed amount of time...can be used towards paying off a purchase

4. Shannon is buying a computer that costs $1186 on credit. She can afford regular payments of $125 each month and has these two credit cards to choose from:
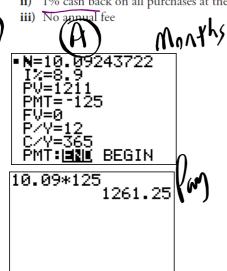   • Card A charges 8.9%, compounded daily, with an annual fee of $25.
   • Card B charges 14.9%, compounded daily, with an annual fee of $50.
   The annual fee is added to the first month's balance on both cards.
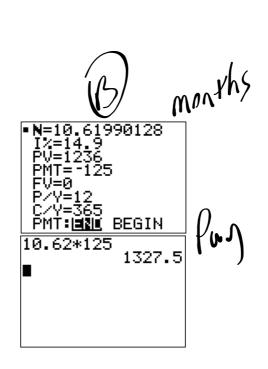   a) For each card, how much would she pay, in total, to buy the computer?
   b) Which incentive below would make card B a more attractive choice than card A?
      i)   An immediate rebate of $75
      ii) 1% cash back on all purchases at the end of each year
      iii) No annual fee

Handwritten annotations:

b) i)
```
N=9.934009669
I%=14.9
PV=1161
PMT=-125
FV=0
P/Y=12
C/Y=365
PMT:END BEGIN
```
← Better Card

ii) 0.01 × 1186 = 11.86
Pay on interest
No better

iii)
```
N=10.16199191
I%=14.9
PV=1186
PMT=-125
FV=0
P/Y=12
C/Y=365
PMT:END BEGIN
```
← No better

a)

(A) Months
```
N=10.09243722
I%=8.9
PV=1211
PMT=-125
FV=0
P/Y=12
C/Y=365
PMT:END BEGIN
```
```
10.09*125
        1261.25
```
Pay

(B) months
```
N=10.61990128
I%=14.9
PV=1236
PMT=-125
FV=0
P/Y=12
C/Y=365
PMT:END BEGIN
```
```
10.62*125
        1327.5
```
Pay

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.
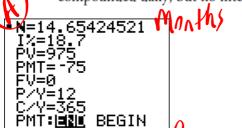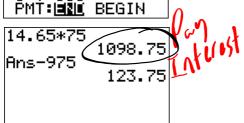
APPLY the Math p. 543

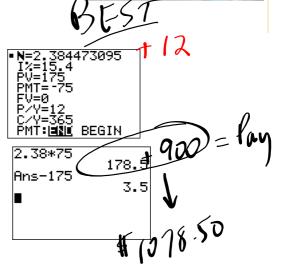| EXAMPLE 1	Solving a credit problem that involves overall cost and number of payments

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

(Ⓐ)

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

```
14.65*75
           1098.75
Ans-975
           123.75
```
Pay Interest

BEST

(Ⓑ)   *+12*

```
•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-175
           3.5
■
```
900 = Pay

#1078.50

EXAMPLE 2
p. 544

Solving a credit problem that involves payment amount and overall cost

Ed wants to buy a car and needs to use credit to finance it. The cost, with taxes and shipping, is $24 738. Ed wants to repay his loan in 4 years using monthly payments and has two credit options:

~~•~~ His secured line of credit at 1.7%, compounded <u>monthly</u>, above the Bank of Canada rate, which is currently 0.5%

} *Rate = 2.2%*

• The dealership's financing plan at 2.5%, compounded daily

a) Which option should he choose? Why?

L.2 C

```
N=48
I%=2.2
PV=24738
▪PMT=-538.85602…
FV=0
P/Y=12
C/Y=12
PMT:END BEGIN
```

PMT

Financing

```
N=48
I%=2.5
PV=24738
▪PMT=-542.13675…
FV=0
P/Y=12
C/Y=365
PMT:END BEGIN
```

```
48*538.86
          25865.28
Ans-24738
          1127.28
```

Pay Interest

```
542.14*48
          26022.72
Ans-24738
          1284.72
■
```

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...

p. 552

1, 2, 3, 4, 10