Credit Cards – Sheet #2 $I = P \cdot r \cdot t$

1. Calculate the **interest, the balance due** and **minimum payments** on the following credit cards.
   (5.00% or $10.00, whichever is greater).

   a) Unpaid balance: $55.00

      Interest rate per annum: 28.00% per annum

      Time: 18 days

      Interest: $I = (55)(0.28)(\frac{18}{365}) = \$0.76$

      Minimum Payment: $55.00 \times 0.05 = \$2.75$ or $\$10.00$

   b) Unpaid balance: $250.00

      Interest rate per annum: 17.00% per annum

      Time: 14 days

      Interest: $I = (250)(0.17)(\frac{14}{365}) = \$1.63$

      Minimum Payment: $250.00 \times 0.05 = \$12.50$ or $\$10.00$

   c) Unpaid balance: $355.00

      Interest rate per annum: 18% per annum

      Time: 30 days

      Interest: $I = (355)(0.18)(\frac{30}{365}) = \$5.25$

      Minimum Payment: $355.00 \times 0.05 = \$17.75$ or $\$10.00$

   d) Unpaid balance: $80.00

      Interest rate per annum: 19.75% per annum

      Time: 20 days

      Interest: $I = (80)(0.1975)(\frac{20}{365}) = \$0.87$

      Minimum Payment: $80 \times 0.05 = \$4.00$ or $\$10.00$

   e) Unpaid balance: $410.00

      Interest rate per annum: 15.00% per annum

      Time: 15 days

      Interest: $I = (410)(0.15)(\frac{15}{365}) = \$2.53$

      Minimum Payment: $410 \times 0.05 = \$20.50$ or $\$10.00$

   f) Unpaid balance: $98.00

      Interest rate per annum: 13.25% per annum

      Time: 14 days

      Interest: $I = (98)(0.1325)(\frac{14}{365}) = \$0.50$

      Minimum Payment: $98 \times 0.05 = \$4.90$ or $\$10.00$

g) Unpaid balance: $150.00

Interest rate per annum: 18.25% per annum

Time: 18 days

Interest: $I = (150)(0.1825)(\frac{18}{365}) = \$1.35$

Minimum Payment: $150 \times 0.05 = \$7.50$ or $\boxed{\$10.00}$

h) Unpaid balance: $80.00

Interest rate per annum: 17.25% per annum

Time: 16 days

Interest: $I = (80)(0.1725)(\frac{16}{365}) = \$0.60$

Minimum Payment: $80 \times 0.05 = 4.00$ or $\boxed{\$6.00}$

i) Unpaid balance: $299.00

Interest rate per annum: 18.25% per annum

Time: 19 days

Interest: $I = (299)(0.1825)(\frac{19}{365}) = \$2.84$

Minimum Payment: $299 \times 0.05 = \boxed{\$14.95}$ or $\$10.00$

j) Unpaid balance: $80.00

Interest rate per annum: 13.75% per annum

Time: 16 days

Interest: $I = (80)(0.1375)(\frac{16}{365}) = \$0.48$

Minimum Payment: $80 \times 0.05 = \$4.00$ or $\boxed{\$10.00}$

Credit Card Statement
Minimum payment is 5% or $10.00, whichever is greater

Send Payment To:
PO Box 555
Anytown, US

Account Number	Name	Statement Date	Payment Due Date
1234 567 8901	Suzy Student	1/15/2005	2/14/2005

Credit Line	Credit Available	New Balance	Minimum Payment Due
$1500.00	679.43	820.57	10.00

Reference	Sold	Posted	Activity Since Last Statement		Amount
89XB773		12/12	Payment Thank You		(258.00)
78XY667	12/20	12/22	Gas 'n' Go	SmallTown US	35.24
34XP889	12/23	12/26	Gift Attic	Whoville US	63.02
23XY001	12/26	12/28	Computer Monitor	Techville US	697.78
76X0E11	1/8	1/10	Pizza Palace	SmallTown US	24.53

820.57

Previous Balance	(+)	258.00	Current Amount Due	
Purchases	(+)		Amount Past Due	
Cash Advances	(+)		Amount Over Credit Line	
Payments	(-)	258.00	Minimum Payment Due	
Credits	(-)			
Finance Charges	(+)			
Late Charges	(+)			
NEW BALANCE	(=)			

FINANCE CHARGE SUMMARY	PURCHASES	ADVANCES	For Customer Service Call: 1-800-555-5555
Annual Percentage Rate	36 %	36 %	For Lost or Stolen Cards, Call: 1-888-555-5555

a) What was the previous balance? $258.00

b) What interest rate is charge on this credit card?   36%

c) Was there a payment made by the credit card holder?   Yes $258.a

d) How many purchases were made this month?   4

e) How much interest will this customer have to pay?   ∅

f) What should be the minimum payment and when is it due?

$$0 \times 0.05 = \$0 \quad \text{or} \quad \boxed{\$10.00}$$

$$\text{Available Credit} = \text{Credit Limit} - \text{New Balance}$$

$$\text{Available Credit} = 1500.00 - 820.57$$

$$= 679.43$$

SEND PAYMENT TO
Box 1244
Anytown, USA

**CREDIT CARD
STATEMENT**

ACCOUNT NUMBER	NAME	STATEMENT DATE	PAYMENT DUE DATE
4125-239-412	John Doe	2/13/09	3/09/09

CREDIT LINE	CREDIT AVAILABLE	NEW BALANCE	MINIMUM PAYMENT DUE
$1200.00			19.62

REFERENCE	SOLD	POSTED	ACTIVITY SINCE LAST STATEMENT	AMOUNT
483GE7382		1/25	PAYMENT THANK YOU	-168.80
32F349ER3	1/12	1/15	RECORD RECYCLER ANYTOWN, USA	14.83
89102DIS2	1/13	1/15	BEEFORAMA REST ANYTOWN, USA	30.55
NX34FJD32	1/18	1/18	GREAT ESCAPES BIG CITY, USA	27.50
84RT3293A	1/20	1/21	DINO-GEL GASOLINE ANYTOWN, USA	12.26
973DWS321	2/09	2/09	SHIRTS 'N SUCH TINYVILLE, USA	40.10

Previous Balance	(+)	168.80		Current Amount Due	125.24
Purchases	(+)			Amount Past Due	
Cash Advances	(+)			Amount Over Credit Line	
Payments	(-)	168.80		Minimum Payment Due	19.62
Credits	(-)				
FINANCE CHARGES	(+)				
Late Charges	(+)				
NEW BALANCE	(=)				

FINANCE CHARGE SUMMARY	PURCHASES	ADVANCES	For Customer Service Call:
			1-800-xxx-xxxx
Annual Percentage Rate	19.80%	6.48%	For Lost or Stolen Card, Call:
			1-800-xxx-xxxx
			24-Hour Telephone Numbers

a) What was the previous balance?

b) What interest rate is charge on this credit card?

c) Was there a payment made by the credit card holder?

d) What will the new balance be?

e) What is the available credit?

f) How is the minimum payment calculated?

Personal Loans
Lines of Credit
Overdrafts

Terminology Matching
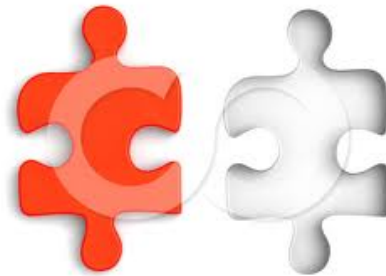
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Payday loan

Default

asset

collateral

overdraft protection

amortization period

loan

line of credit

_____: failure to repay a loan

_____: an approved loan amount that you can draw on as needed, with interest charged on the money used
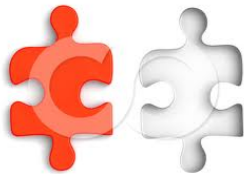
_____: an item of value pledged by a borrower to secure a loan

_____: an agreement with a bank that allows you to withdraw more money from an account than you have in it, up to a specified amount

_____: an item of economic value owned by an individual that could be converted to cash

_____: money that is borrowed for a specific term, to be paid back with interest

_____: a small, short-term loan with high interest rate intended to cover the borrower's expenses until their next pay day

_____: the time required to pay back a loan

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Secure vs Unsecure Loans:

The borrower has a promise to turn over to the lender a particular item of value if the loan is not paid.

car

There is no collateral needed. "Low risk"

A payday loan store charged Matt $40.00 interest on a $350.00 loan. Matt paid back the total amount of $390 after 10 days.

What was the daily interest for this loan?

$$I = Prt$$

x 100 =   yearly interest

/ 365 =   daily interest

Jean-Paul borrows $2500 to purchase a laptop computer and software. He takes out a personal loan from his credit union at an annual rate of 6.25% with an amortization period of 2 years. Use the personal loan payment calculator table (page 132) to answer the questions.

PERSONAL LOAN PAYMENT CALCULATOR:
MONTHLY PAYMENT PER $1000.00 BORROWED
(INTEREST COMPOUNDED MONTHLY)

Interest rate (%)	Term in years				
	1	2	3	4	5
3.00	84.69	42.98	29.08	22.13	17.97
3.25	84.81	43.09	29.19	22.24	18.08
5.00	85.61	43.87	29.97	23.03	18.87
5.25	85.72	43.98	30.08	23.14	18.99
5.50	85.84	44.10	30.20	23.26	19.10
5.75	85.95	44.21	30.31	23.37	19.22
6.00	86.07	44.32	30.42	23.49	19.33
6.25	86.18	44.43	30.54	23.60	19.45
6.50	86.30	44.55	30.65	23.71	19.57
6.75	86.41	44.66	30.76	23.83	19.68
7.00	86.53	44.77	30.88	23.95	19.80

1. What is Jean-Paul's monthly payment?

$$2500/1000 = 2.5 \qquad 44.43 \times 2.5 = \$111.08$$

2. Calculate the total amount he will pay over the 2 years.

$$\$111.08 \times 24 \text{ months} = \$2665.92$$

3. Calculate the finance charge on the loan.

$$2665.92 - 2500 = \$165.92$$

Jennifer borrows $6520 at her credit union at an annual rate of 5.25% with an amortization period of 4 years. Use the personal loan payment calculator table (page 132) to answer the questions.

1. What is Jennifer's monthly payment?

2. Calculate the total amount she will pay
    over the 4 years.

3. Calculate the finance charge on the loan.

Important

PERSONAL LOAN PAYMENT CALCULATOR:
MONTHLY PAYMENT PER $1000.00 BORROWED
(INTEREST COMPOUNDED MONTHLY)

Interest rate (%)	Term in years				
	1	2	3	4	5
3.00	84.69	42.98	29.08	22.13	17.97
3.25	84.81	43.09	29.19	22.24	18.08
5.00	85.61	43.87	29.97	23.03	18.87
5.25	85.72	43.98	30.08	23.14	18.99
5.50	85.84	44.10	30.20	23.26	19.10
5.75	85.95	44.21	30.31	23.37	19.22
6.00	86.07	44.32	30.42	23.49	19.33
6.25	86.18	44.43	30.54	23.60	19.45
6.50	86.30	44.55	30.65	23.71	19.57
6.75	86.41	44.66	30.76	23.83	19.68
7.00	86.53	44.77	30.88	23.95	19.80

Trevor borrowed 932.00 from the bank of Montreal at an annual rate of 6.50% with an amortization period of 3 years. Use you personal loan calculator to answer the questions.

a) What is the monthly payment?

PERSONAL LOAN PAYMENT CALCULATOR:
MONTHLY PAYMENT PER $1000.00 BORROWED
(INTEREST COMPOUNDED MONTHLY)

Interest rate (%)	Term in years				
	1	2	3	4	5
3.00	84.69	42.98	29.08	22.13	17.97
3.25	84.81	43.09	29.19	22.24	18.08
5.00	85.61	43.87	29.97	23.03	18.87
5.25	85.72	43.98	30.08	23.14	18.99
5.50	85.84	44.10	30.20	23.26	19.10
5.75	85.95	44.21	30.31	23.37	19.22
6.00	86.07	44.32	30.42	23.49	19.33
6.25	86.18	44.43	30.54	23.60	19.45
6.50	86.30	44.55	30.65	23.71	19.57
6.75	86.41	44.66	30.76	23.83	19.68
7.00	86.53	44.77	30.88	23.95	19.80

b) How much will he pay back in total?

c) What is the finance charge?

Homework

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