

Credit Cards - Sheet #2

$$I = Prt$$

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: | $I = (55)(0.28)\left(\frac{18}{365}\right) = \0.76 |
| Interest rate per annum: | 28.00% per annum | Minimum Payment: | $55.00 \times 0.05 = \$2.75$ or $\$10.00$ |
| Time: | 18 days | | |
| b) Unpaid balance: | \$250.00 | Interest: | $I = (250)(0.17)\left(\frac{14}{365}\right) = \1.63 |
| Interest rate per annum: | 17.00% per annum | Minimum Payment: | $250.00 \times 0.05 = \$12.50$ or $\$10.00$ |
| Time: | 14 days | | |
| c) Unpaid balance: | \$355.00 | Interest: | $I = (355)(0.18)\left(\frac{30}{365}\right) = \5.25 |
| Interest rate per annum: | 18% per annum | Minimum Payment: | $355.00 \times 0.05 = \$17.75$ or $\$10.00$ |
| Time: | 30 days | | |
| d) Unpaid balance: | \$80.00 | Interest: | $I = (80)(0.1975)\left(\frac{20}{365}\right) = \0.87 |
| Interest rate per annum: | 19.75% per annum | Minimum Payment: | $80 \times 0.05 = \$4.00$ or $\$10.00$ |
| Time: | 20 days | | |
| e) Unpaid balance: | \$410.00 | Interest: | $I = (410)(0.15)\left(\frac{15}{365}\right) = \2.53 |
| Interest rate per annum: | 15.00% per annum | Minimum Payment: | $410 \times 0.05 = \$20.50$ or $\$10.00$ |
| Time: | 15 days | | |
| f) Unpaid balance: | \$98.00 | Interest: | $I = (98)(0.1325)\left(\frac{14}{365}\right) = \0.50 |
| Interest rate per annum: | 13.25% per annum | Minimum Payment: | $98 \times 0.05 = \$4.90$ or $\$10.00$ |
| Time: | 14 days | | |

<p>g) Unpaid balance: \$150.00 Interest rate per annum: 18.25% per annum Time: 18 days</p>	<p>Interest: $I = (150)(0.1825)\left(\frac{18}{365}\right) = \\1.35 Minimum Payment: $150 \times 0.05 = \\$7.50$ or $\\$10.00$</p>
<p>h) Unpaid balance: \$80.00 Interest rate per annum: 17.25% per annum Time: 16 days</p>	<p>Interest: $I = (80)(0.1725)\left(\frac{16}{365}\right) = \\0.60 Minimum Payment: $80 \times 0.05 = 4.00$ or $\\$10.00$</p>
<p>i) Unpaid balance: \$299.00 Interest rate per annum: 18.25% per annum Time: 19 days</p>	<p>Interest: $I = (299)(0.1825)\left(\frac{19}{365}\right) = \\2.84 Minimum Payment: $299 \times 0.05 = \\$14.95$ or $\\$10.00$</p>
<p>j) Unpaid balance: \$80.00 Interest rate per annum: 13.75% per annum Time: 16 days</p>	<p>Interest: $I = (80)(0.1375)\left(\frac{16}{365}\right) = \\0.48 Minimum Payment: $80 \times 0.05 = \\$4.00$ or $\\$10.00$</p>

Send Payment To:
PO Box 555
Anytown, US

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

Account Number 1234 567 8901	Name Suzy Student	Statement Date 1/15/2005	Payment Due Date 2/14/2005
Credit Line \$1500.00	Credit Available 679.43	New Balance 820.57	Minimum Payment Due 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

<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Previous Balance (+)</td> <td style="width: 50%;">258.00</td> </tr> <tr> <td>Purchases (+)</td> <td></td> </tr> <tr> <td>Cash Advances (+)</td> <td></td> </tr> <tr> <td>Payments (-)</td> <td>258.00</td> </tr> <tr> <td>Credits (-)</td> <td></td> </tr> <tr> <td>Finance Charges (+)</td> <td></td> </tr> <tr> <td>Late Charges (+)</td> <td></td> </tr> <tr> <td>NEW BALANCE (=)</td> <td></td> </tr> </table>	Previous Balance (+)	258.00	Purchases (+)		Cash Advances (+)		Payments (-)	258.00	Credits (-)		Finance Charges (+)		Late Charges (+)		NEW BALANCE (=)		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Current Amount Due</td> <td></td> </tr> <tr> <td>Amount Past Due</td> <td></td> </tr> <tr> <td>Amount Over Credit Line</td> <td></td> </tr> <tr> <td>Minimum Payment Due</td> <td></td> </tr> </table>	Current Amount Due		Amount Past Due		Amount Over Credit Line		Minimum Payment Due	
Previous Balance (+)	258.00																								
Purchases (+)																									
Cash Advances (+)																									
Payments (-)	258.00																								
Credits (-)																									
Finance Charges (+)																									
Late Charges (+)																									
NEW BALANCE (=)																									
Current Amount Due																									
Amount Past Due																									
Amount Over Credit Line																									
Minimum Payment Due																									

FINANCE CHARGE SUMMARY	PURCHASES	ADVANCES	For Customer Service Call: 1-800-555-5555
Annual Percentage Rate	<u>36 %</u>	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 \$258.00**
- d) How many purchases were made this month? **4**
- e) How much interest will this customer have to pay? **0**
- f) What should be the minimum payment and when is it due?

$0 \times 0.05 = \$0$ or **(\$10.00)**

Available Credit = Credit Limit - New Balance

Available Credit = $1500.00 - 820.57$

Available Credit = **679.43**

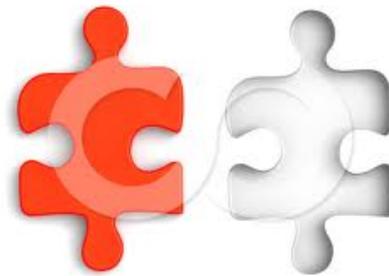
CREDIT CARD STATEMENT				SEND PAYMENT TO Box 1244 Anytown, USA	
ACCOUNT NUMBER	NAME	STATEMENT DATE	PAYMENT DUE DATE		
4125-239-412	John Doe	2/13/09	3/09/09		
CREDIT LINE	CREDIT AVAILABLE	NEW BALANCE	MINIMUM PAYMENT DUE		
\$1200.00			10.00		
REFERENCE	SOLD	POSTED	ACTIVITY SINCE LAST STATEMENT	AMOUNT	
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	10.00	
Payments	(-)	168.80	Minimum Payment Due		
Credits	(-)				
FINANCE CHARGES	(+)				
Late Charges	(+)				
NEW BALANCE	(=)				
FINANCE CHARGE SUMMARY	PURCHASES	ADVANCES	For Customer Service Call:		
Annual Percentage Rate	19.80%	6.48%	1-800-xxx-xxxx		
			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



© Tonis Pan * www.ClipartOf.com/81975

Payday loan **Default** : failure to repay a loan

~~Default~~

line of credit

~~asset~~ : an approved loan amount that you can draw on as needed, with interest charged on the money used

~~collateral~~

Collateral

: an item of value pledged by a borrower to secure a loan

~~overdraft protection~~

overdraft protection

amortization period

: 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

~~loan~~

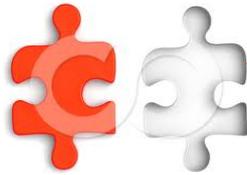
asset

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

~~line of credit~~

loan

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



Payday loan

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

© Tonis Pan · www.ClipartOf.com/91975

Amo

: the time required to pay back a loan

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?

$$I = Prt$$

$$40 = 350(r) \left(\frac{10}{365} \right)$$

$$40 = \frac{9.58904r}{9.58904}$$

$$4.17 = r$$

$$4.17 \times 100 = 417\% \text{ yearly interest}$$

$$417 / 365 = 1.14\% \text{ daily interest}$$

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.

Important

PERSONAL LOAN PAYMENT CALCULATOR: MONTHLY PAYMENTS 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?

$$\underline{2500/1000} = 2.5 \quad \underline{44.43} \times 2.5 = \underline{\underline{\$111.08}}$$

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

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

3. Calculate the finance charge on the loan.

$$\underline{2665.92} - 2500 = \underline{\underline{\$165.92}}$$

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.

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

1. What is Jennifer's monthly payment?

$$\frac{6520}{1000} = 6.52$$

$$6.52 \times 23.14 = \$150.87$$

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

$$\$150.87 \times 48 = \$7241.76$$

3. Calculate the finance charge on the loan.

$$7241.76 - 6520 = \$721.76$$

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

a) What is the monthly payment?

$$932 \div 1000 = 0.932$$

$$0.932 \times 30.65 = 28.56$$

b) How much will he pay back in total?

$$28.56 \times 36 = 1028.16$$

c) What is the finance charge?

$$1028.16 - 932.00 = \$96.16$$

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

Homework

Page 135 #1-6