**Credit Card Calculations Practice**

1. Janine’s credit card was stolen, and the thief charged an $80 meal before she reported it stolen. How much of this is Janine responsible for paying? Why?

2. Felix and Oscar applied for the same credit card from the same bank. The bank checked both of their FICO scores. Felix had an excellent credit rating, and Oscar had a poor credit rating.

 a) Felix was given a card with an APR of 12%. What was his monthly interest rate?

 b) Oscar was given a card with an APR of 26%. What was his monthly interest rate?

c) If each of them had an average daily balance of $800 and had to pay a finance charge, how much more would Oscar pay than Felix?

3. Jared’s average daily balance for last month was $560. The finance charge was $8.12.

 a) What was the monthly interest rate?

 b) What was the APR?

4. Ron did not pay his credit card bill in full last month. He wants to pay it in full this month. The credit card company lists the average daily balance on his bill as $510.50. If the APR is 18%, what finance charge does Ron need to pay from last month’s bill?

5. Jill’s credit card was stolen. The theif charged a $900 kayak on the card after she reported it stolen. How much of the theif’s purchase is Jill responsible for paying? Why?

6. Use the credit card statement below to answer the following questions.



 a) How many purchases were made during the billing cycle?

 b) What is the sum of all purchases made during the billing cycle?

 c) When is the payment for this statement due?

 d) What is the minimum amount that can be paid?

 e) How many days are in the billing cycle?

 f) What is the previous balance?

 g) How much did this person pay of his bill from last month?

 h) Did this person pay his/her whole bill last month? How do you know?

7. Rollie has a credit card with a line of credit at $4,000. He made the following purchases: $425.36, $358.33, $377.11, and $90.20. What is Rollie’s available credit?

8. The APR on Leslie’s credit card is currently 21.6%. What is the monthly periodic rate?

9. Sheldon’s monthly periodic rate is 1.95%. What is the APR?

10. Sabrina’s previous credit card balance from last month was $939.81. She made $125.25 worth of new purchases this month, and incurred a $30 late charge and $15.38 finance charge. If her new balance is $833.44, what was her payment amount on last month’s bill?

11. Monty has a credit card balance of $2,000 that he cannot pay off. His credit card has a 20.4% APR.

a) If he makes the minimum payment of $35 each month and stops using the card for new purchases, how many months will it take Monty to pay off his credit card debt?

$$N=\frac{1}{30}\frac{ln\left(1+\frac{B}{M}\left(1-\left(1+\frac{r}{365}\right)^{30}\right)\right)}{ln\left(1+\frac{r}{365}\right)}$$

 b) How much will Monty have paid in finance charges (interest) by the time he pays it off?

12. Ariel has a credit card with an APR of 19.8%. She has accumulated $2,948.72 in credit card debt, so she decides to stop using her credit card and pay off her debt.

a) What monthly payment does she need to make on her credit card if she wants to be debt-free in one year?

$$M= \frac{P\left(\frac{r}{12}\right)\left(1+\frac{r}{12}\right)^{12t}}{\left(1+\frac{r}{12}\right)^{12t}-1}$$

 b) How much will Ariel pay in finance charges if it takes her one year to pay off her debt?

c) Ariel creates a budget for herself and realizes she can only pay $150 per month on her credit card. If she pays this amount instead, how many months will it take Ariel to pay off the debt on her credit card?

$$N=\frac{1}{30}\frac{ln\left(1+\frac{B}{M}\left(1-\left(1+\frac{r}{365}\right)^{30}\right)\right)}{ln\left(1+\frac{r}{365}\right)}$$

 d) How much will Ariel pay in finance charges if she can only make monthly payments of $150?

**Credit Card Calculations Practice KEY**

1. Janine’s credit card was stolen, and the thief charged an $80 meal before she reported it stolen. How much of this is Janine responsible for paying? At most $50 because it was charged before she reported it.

2. Felix and Oscar applied for the same credit card from the same bank. The bank checked both of their FICO scores. Felix had an excellent credit rating, and Oscar had a poor credit rating.

 a) Felix was given a card with an APR of 12%. What was his monthly interest rate?

 Monthly interest rate = APR/12 = 12%/12 = 1%

 b) Oscar was given a card with an APR of 26%. What was his monthly interest rate?

 Monthly interest rate = APR/12 = 26%/12 = 2.17%

c) If each of them had an average daily balance of $800 and had to pay a finance charge, how much more would Oscar pay than Felix?

 Finance charge = Average daily balance\*(monthly interest rate)

 Felix’s finance charge = $800\*(0.01) = $8 Oscar’s finance charge = $800\*(0.0217) = $17.36

 Difference = $17.36 – 8 = $9.36 Oscar would pay $9.36 more than Felix in finance charges.

3. Jared’s average daily balance for last month was $560. The finance charge was $8.12.

 a) What was the monthly interest rate?

 Finance charge = Average daily balance\*(monthly interest rate)

 monthly interest rate = Finance charge/Average daily balance = $8.12/560 = 0.0145 = 1.45%

b) What was the APR?

 Monthly interest rate = APR/12 APR = Monthly rate\*12 = 1.45%(12) = 17.4%

4. Ron did not pay his credit card bill in full last month. He wants to pay it in full this month. The credit card company lists the average daily balance on his bill as $510.50. If the APR is 18%, what finance charge does Ron need to pay from last month’s bill?

Finance charge = Average daily balance\*(APR/12) = $510.50\*(.18/12) = $7.66

5. Jill’s credit card was stolen. The thief charged a $900 kayak on the card after she reported it stolen. How much of the thief’s purchase is Jill responsible for paying?

Nothing! It was purchased after she reported it stolen.

6. Use the credit card statement below to answer the following questions.



 a) How many purchases were made during the billing cycle?

 4 purchases were made (does not include the payment made!)

 b) What is the sum of all purchases made during the billing cycle?

 New purchases = $1,227.24

 c) When is the payment for this statement due?

 June 8th

 d) What is the minimum amount that can be paid?

 $30.00

 e) How many days are in the billing cycle?

 30

 f) What is the previous balance?

 $420.50

 g) How much did this person pay of his bill from last month?

 $150.00

 h) Did this person pay his/her whole bill last month? How do you know? No – finance charge of $19.80 (also the previous balance is more than the payments made)

7. Rollie has a credit card with a line of credit at $4,000. He made the following purchases: $425.36, $358.33, $377.11, and $90.20. What is Rollie’s available credit?

Available credit = credit line – current balance

Available credit = $4,000 – (425.36 + 358.33 + 377.11 + 90.20) = $2,749.00

8. The APR on Leslie’s credit card is currently 21.6%. What is the monthly periodic rate?

Monthly rate = APR/12 = 21.6%/12 = 1.8%

9. Sheldon’s monthly periodic rate is 1.95%. What is the APR?

Monthly rate = APR/12

APR = Monthly rate\*(12) = 1.95%(12) = 23.4%

10. Sabrina’s previous credit card balance from last month was $939.81. She made $125.25 worth of new purchases this month, and incurred a $30 late charge and $15.38 finance charge. If her new balance is $833.44, what was her payment amount on last month’s bill?

Previous balance + new purchases + late charge + finance charge – payments = New balance

Payments = $939.81 + 125.25 + 30 + 15.38 – 833.44 = $277

11. Monty has a credit card balance of $2,000 that he cannot pay off. His credit card has a 20.4% APR.

a) If he makes the minimum payment of $35 each month and stops using the card for new purchases, how many months will it take Monty to pay off his credit card debt?

$$N=\frac{1}{30}\frac{ln\left(1+\frac{B}{M}\left(1-\left(1+\frac{r}{365}\right)^{30}\right)\right)}{ln\left(1+\frac{r}{365}\right)}$$

 B = $2,000

 r = 0.204

 M = $35

 Number of months it will take to pay back = 201.6 (almost 17 years!)

 b) How much will Monty have paid in finance charges (interest) by the time he pays it off?

 Total amount paid: $35\*(202) = $7,070 Finance charge = $7,070 – 2,000 = $5,070

12. Ariel has a credit card with an APR of 19.8%. She has accumulated $2,948.72 in credit card debt, so she decides to stop using her credit card and pay off her debt.

a) What monthly payment does she need to make on her credit card if she wants to be debt-free in one year?

$$M= \frac{P\left(\frac{r}{12}\right)\left(1+\frac{r}{12}\right)^{12t}}{\left(1+\frac{r}{12}\right)^{12t}-1}$$

 P = $2,948.72

 r = 0.198

 t = 1

 Monthly payment = $272.87

 b) How much will Ariel pay in finance charges if it takes her one year to pay off her debt?

 Total amount paid = $272.87\*(12) = $3,274.44

 Finance charge = $3,274.44 – 2,948.72 = $325.72

c) Ariel creates a budget for herself and realizes she can only pay $150 per month on her credit card. If she pays this amount instead, how many months will it take Ariel to pay off the debt on her credit card?

$$N=\frac{1}{30}\frac{ln\left(1+\frac{B}{M}\left(1-\left(1+\frac{r}{365}\right)^{30}\right)\right)}{ln\left(1+\frac{r}{365}\right)}$$

 B = $2,948.72

 r = 0.198

 M = $150

 Number of months it will take to pay back = 23.9 (almost 24 months = 2 years)

 d) How much will Ariel pay in finance charges if she can only make monthly payments of $150?

 Total amount paid: $150\*(24) = $3,600

 Finance charge = $3,600 – 2,948.72 = $651.28