

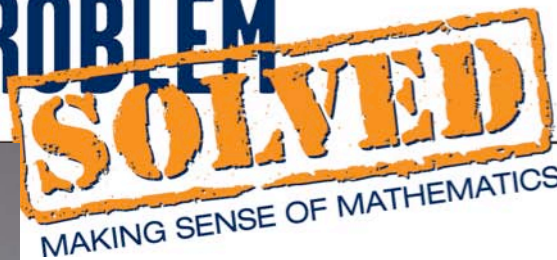
1. You have a credit card with an *Annual Percentage Rate* (APR) of 24.9% and a balance of \$1594.25. You decide it is time to get your credit card debt paid off, so you stop making purchases on this card and start making the minimum payment each month. Study the table below to see what happens the first six months of your plan. The interest charge is based on the average monthly balance for each month.

Month	Current Balance	Minimum Due	Balance After Payment	Interest Charge	New Balance
1	\$1594.25	\$63.77	\$1530.48	\$31.97	\$1562.45
2	\$1562.45	\$62.50	\$1499.95	\$31.33	\$1531.28
3	\$1531.28	\$61.25	\$1470.03	\$30.70	\$1500.73
4	\$1500.73	\$60.03	\$1440.70	\$30.09	\$1470.79
5	\$1470.79	\$58.83	\$1411.96	\$29.49	\$1441.45
6	\$1441.45	\$57.66	\$1383.79	\$28.90	\$1412.69

- a. How much did you make in payments during the last six months?
 The third column shows the amount you paid each month. Find the total amount paid over the course of six months by adding the amounts in the third column.
 $\$63.77 + \$62.50 + \$61.25 + \$60.03 + \$58.83 + 57.66 = \364.04
- b. What is the difference between your starting balance and your balance at the end of the sixth month?
 $\$1594.25 - 1412.69 = \181.56
- c. Why is there a difference between your answers for part a and part b?
 You made payments worth a total of \$364.04 over the course of six months, but the credit card company also added interest to your balance each month.
- d. You continue to make the minimum payment without additional purchases or fees. Estimate how long it will take to pay off the card. Explain how you determined your estimate. You do not have enough information to get an exact answer.
 Answers and reasoning will vary.

One way to think about this problem is to compare the minimum payments and the interest charge each month. The difference is approximately \$30.00. If your balance is reduced by \$30 each month, it should take approximately 53 months, or about 4½ years, to pay off the balance ($\$1594.25 \div \$30.00 \approx 53$ months). However, if you compare each monthly minimum payment with the interest charged, the difference gets smaller as time progresses. As a result it will probably take much longer than 4½ years to pay off the balance making only the minimum payment.

The actual time it will take to pay off this credit card balance is about 108 months or 9 years.



2. By law, credit card statements must provide a “Minimum Payment Warning” similar to the one below.

Minimum Payment Warning		
If you make only the minimum payment each period, it will take you longer to pay off your balance and you will pay more in interest.		
If you make no additional charges using this card and each month you pay . . .	You will pay off the balance shown on this statement in about . . .	And you will end up paying an estimated total of . . .
Only the minimum payment	9 years	\$2967.39
\$64.00	3 years	\$2218.59 (Savings = 748.80)

You decide you want to pay off this credit card debt in three years, so you stop making purchases on this card and make a \$64.00 payment on time.

- a. Your next statement also includes the “Minimum Payment Warning.” Which of the cells in the bottom two rows will change on the next statement? Why?

If you make the minimum payment, the first row of numbers will change minimally. It will only take one month less than 9 years to pay off the balance and you will pay slightly less than \$2967.39. The bottom row of numbers will also change. The amount needed to pay off the balance in 3 years will decrease slightly as well as the estimated total.

These changes are due to the credit card company computing the values using the new balance at the end of the previous month. The numbers will not reflect the date, one month earlier, when you decided to pay off your credit card balance in 3 years. The “Minimum Payment Warning” provides information based on the current balance.

- b. How might the “Minimum Payment Warning” be misleading to a person who stops making purchases and wants to pay off the card in three years?

If a person determines to pay off a credit card balance in 3 years from a given date, he or she must remember the payment amount given on that statement. If a person makes the three-year payment listed on the next statement, the date that his or her balance is paid off will be set back one month. If this happens each month it will take approximately as long to pay off the entire balance as the time listed when making only the minimum payment. This is a huge difference in the amount of time it will take to pay off the credit card balance and the amount of money spent. If you decide to pay off a credit card balance in three years, you must: 1) stop making purchases on the card, and 2) continue to make a payment equal to the three-year payoff amount even when future statements give a different, smaller amount.

- c. After making a \$64.00 payment each month for several months in a row, you use this credit card to make a \$200 purchase. What should your next payment be in order to stay on track and pay off the card in a total of three years?

You must make a payment of \$264.00 to keep on track and pay off the credit card balance in three years.