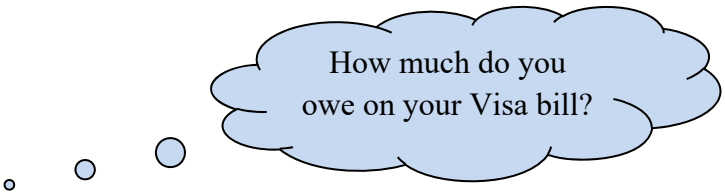


Business Mathematics
Class notes
Open-End Credit and Charge Cards (section 12.1)

Open-end credit means there are no fixed payments, like we have seen in previous sections. You pay monthly until no balance remains, making at least the minimum payment. This is also called **revolving credit**.

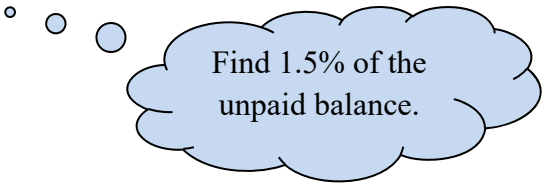
Finance charges (interest owed plus other miscellaneous fees) are based on the balance on an account, by finding some percent of it. There are two main methods banks use to find a credit card's **balance** (total amount owed). They are

1. **Unpaid balance method:** The stated balance is the unpaid balance at the end of the previous month. Any new charges or refunds are *not* used in the calculation.

2. **Average daily balance method:** The balance is found at the end of *each day* and then those balances are averaged for the whole month.

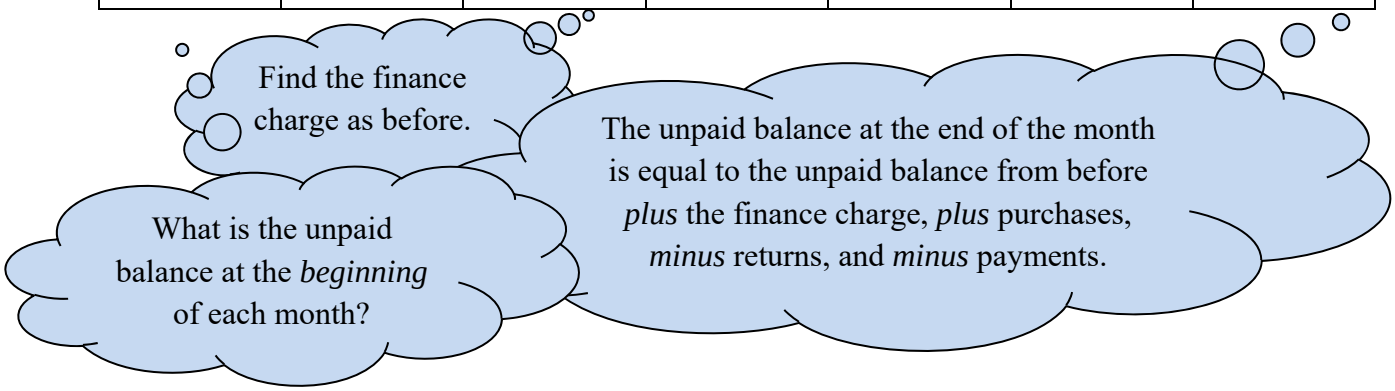
Unpaid Balance Method:

expl 1: Find the finance charge on the revolving charge account. Assume interest is calculated on the unpaid balance.
Unpaid balance: $595.35
Monthly interest rate: 1½ %



expl 2: Complete the table, showing the unpaid balance at the end of each month. Assume an interest rate of 1.4% on the unpaid balance.

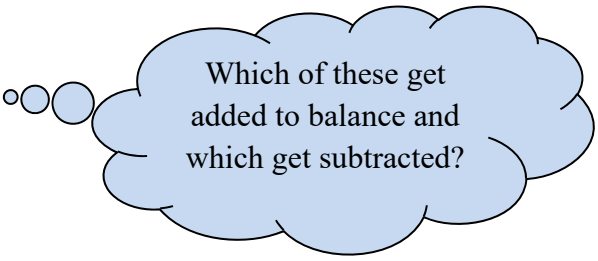
Month	**Unpaid Balance at Beginning of Month**	**Finance Charge**	**Purchases During Month**	**Returns**	**Payments**	**Unpaid Balance at End of Month**
October	$2184.60		$540.68	$50.87	$200	
November			$890.27	--	$250	
December			$1240.13	$89.69	$125	
January			$384.20	--	$575	



Average Daily Balance Method:

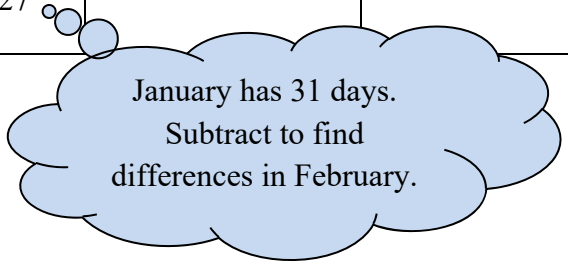
expl 3: For the following account, find the average daily balance. Assume one month between billing dates using the proper number of days in the month. Second, find the finance charge if interest is 1.5 % per month on the average daily balance. Lastly, find the new balance.

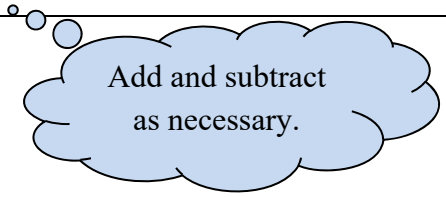
Previous balance: $228.95
Jan. 27 Billing date
Feb. 9 Walmart $11.08
Feb. 13 Returns $26.54
Feb. 20 Payment $29
Feb. 25 Restaurant $71.19



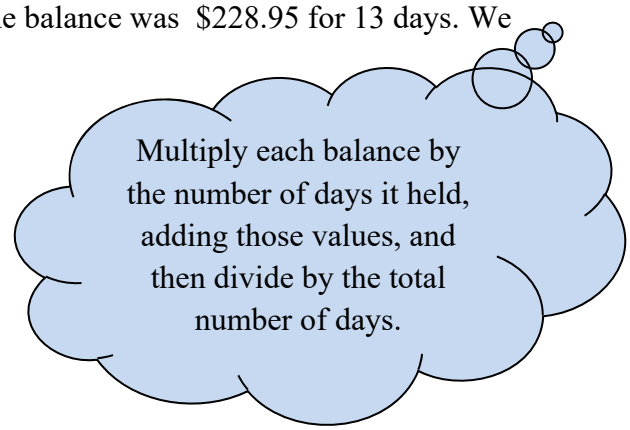
We will work this problem step-by-step. First, we will find the average daily balance. For that, we need to know what the balance was for every day from January 27 to February 27 (one month, starting at the given billing date). Fill out the table to summarize the daily balances.

Dates	Number of days	Balance during this time
Jan. 27 to Feb. 9		
Feb. 9 to Feb. 13		
Feb. 13 to Feb. 20		
Feb. 20 to Feb. 25		
Feb. 25 to Feb. 27		





To find the average daily balance, we average these balances, but need to take into account that the balances each stood for several days. For instance, the balance was $228.95 for 13 days. We use what they call a **weighted average**.



expl 3 (continued): Next, we will find the finance charge which is just a percentage of the average daily balance. We were given that interest is 1.5 % per month on the average daily balance. Remember a dollar sign and proper rounding.

Lastly, to find the new balance, we take the last balance from our table and add the interest. Do it now. Remember a dollar sign.