Section 3.6 Focus Exercises

You will need to do each of these on your own paper.

Instructions: For each, where appropriate, do the following:

a) Set up the legend;
b) identify the formula;
c) set up a chart, if necessary;
d) solve the equation; and
e) write a sentence answering the question.

1. Use the *Amount Paid* formula ($A = P + r \cdot P$) to find the total amount paid (at the cash register) for an item with the given price and sales tax rate.

a) Item price is \$35.00 and the sales tax rate is 6%.

b) Item price is \$75.00 and the sales tax rate is 8%.

c) Tammy purchased computer game over the internet for a total of \$33.60; this amount included 5% sales tax. What was the price of the computer game before tax was included?

2. Use the *Discounted Price* formula ($A = P - r \cdot P$) to find the new discounted price of an item.

a) The original price is \$45.00 and the discount rate is 30%.

b) The original price is \$60.00 and the discount rate is 25%.

c) Mark bought a leather jacket on sale for \$120.00. The sign said it was 25% off the original price. What was the original price of the jacket?

3. Calculate the amount of interest on an account that has the given principal, rate and time. Write a sentence of conclusion. (Use the formula $I = P \cdot r \cdot t$)

a) Principal = \$500
Rate = 12%
Time = 1 year

b) Principal = \$8,000
Rate = 4%
Time = 6 months

c) If Tomás invests \$5,000 at a 6% annual interest rate, how many months will it take for him to accumulate \$200.00?

4. Michelle invested some money in a savings account that was earning 3% annual interest and another in a mutual fund that was earning 6% annual interest. She invested $2,000 more in the mutual fund than she invested in the savings account. If her total interest at the end of the year was $390, how much money did she put in each investment?

	principal **P**	rate **r**	interest **I = P · r**
			I_1 =
			I_2 =
Total			I_T =

5. Eldon invested some money in a savings account that was earning 6% annual interest and another in a mutual fund that was earning 9% annual interest. He invested $500 more in the mutual fund than in the savings account. If his total interest at the end of the year was $270, how much money did he put in each investment?

	principal **P**	rate **r**	interest **I = P · r**
			I_1 =
			I_2 =
Total			I_T =

6. Dariush invested some money in two businesses with a guaranteed return. His restaurant investment earned him a 25% annual return and his retail investment earned him a 15% annual return. He invested $20,000 more in the restaurant than in the retail store. If his total return at the end of the year was $21,000, how much money did he put in each investment?

	principal **P**	rate **r**	interest **I = P · r**
			I_1 =
			I_2 =
Total			I_T =