**DO NOW:**

1. A company that produces widgets has found its demand function to be:

*quantity = – 1,500\*price + 9,000*

1. For each dollar increase in the wholesale price, how many fewer widgets are demanded?
2. How many widgets would be demanded at a price of $20?
3. If the store marks up the widgets that cost $22.50 so that the retail price is 150% more than the original price, what is the new retail price?

**Linear Regression Review:**

1. A music store wants to see if there is a relationship between the number of CDs sold and price of the CDs. They gather data, create a scatterplot, and determine that there is a linear relationship. The linear regression line for the data is:

*Number of CDs sold = – 549.614(price) + 11,723.247*

1. Interpret the slope of the regression line in the context of the problem.
2. Interpret the y-intercept in the context of the problem.
3. Predict how many CDs will be sold at a price of $16.99. Show your work!
4. If the correlation coefficient is *r = – 0.98*, what does that tell us? *(Hint: strength, direction)*

*There is a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ association between the price of CDs and the number of CDs sold.*

1. If the coefficient of determination is *r2 = 0.9604*, what does that tell us?

*The regression line accounts for \_\_\_\_\_\_\_\_\_ % of the variation in the number of CDs sold.*

*This means that (circle one): The line is a good fit for the data*

*The line is a moderate fit for the data*

*The line is not a good fit for the data*

Supply

Demand

price

quantity

**Supply & Demand**

1. The graph below shows the supply and demand curves for a new mp3 player accessory.

$35

1. What is the equilibrium price?
2. Describe the relationship of supply and demand if the item were sold for $20
3. Describe the relationship of supply & demand if the item were sold for $40
4. For what prices would there be a surplus (where the supply is greater than the demand)?
5. For what prices would there be a shortage (where the demand is greater than the supply)?

**Markup**

1. A store sells widgets for $9.20 each. A local store marks them up an additional $8.79. What is the retail price at this local store?
2. The Knockey Corporation sells hockey sticks at a wholesale price of $103. If a store marks them up so that the retail price is 106% more than the wholesale price, what is the retail price?