9.4 Application Problems

Name_____

Word Problems with Two Variables

- Word Problems
 - 1. Define your variables
 - 2. Set up the equations
 - 3. Solve the equations
 - 4. Check your solutions
 - 5. Answer what is asked
- A customer walks into an electronics store and buys five MP3 players and eight sets of headphones, paying \$840. A second customer buys three MP3 players and four sets of headphones, and pays \$480. How much does an MP3 player cost? How much does a set of headphones cost?

 Walt made an extra \$9000 last year from a part-time job. He invested part of the money at 9% and the rest at 8%. He made a total of \$770 in interest. How much was invested at 8%?

 Ziggy's Famous Yogurt blends regular yogurt that is 3% fat with its no-fat yogurt to obtain low fat yogurt that is 1% fat. How many pounds of no-fat yogurt should be mixed to obtain 60 pounds of low fat yogurt? 4. In a chemistry class, 12L of a 12% alcohol solution must be mixed with a 20% solution to get a 14% solution. How many liters of the 20% solution are needed?

5. A boat traveled 168 miles downstream and back. The trip downstream took 7 hours. The trip back took 42 hours. Find the speed of the boat in still water and the speed of the current.