

1) You invested a total of \$1500 in two accounts. After one year, you earned a total of \$138. One account paid a 12% return and the other paid an 8% return. How much money did you invest into each account?

2) A metal worker needs to combine two metal alloys. The first contains 16% copper and the second contains 28% copper. How much of each alloy is needed to create a 32 ounce mixture with 25% copper?

3) Mathman can kayak 12 miles in 2 hours if he is moving with the current. When he is moving against the current, it takes 4 hours to go $\frac{2}{3}$ of the previous distance. What is the rate Mathman is kayaking and the rate of the current?

4) Zippy makes "I Love Math" mugs that he sells for \$12 each. The mugs cost \$4.50 each to make and Zippy pays \$1200 a month to run his business. Assuming that he sells x mugs a month, write an equation that represents his revenue and another that represents his cost. What is the breakeven point for his company? What is his profit equation?