Systems of Equations: Mixture Word Problems

Name:_____

Directions: Solve each word problem by following the steps. **Show all work.**

1.   A 40% tin metal must be mixed with a 70% tin metal to get 150 kilograms of metal that is 52% tin. How much of each must be used?

2.   How many pounds of each tea, one that costs $4.20 per pound and another that costs $2.25 per pound, to make 50 pounds a mixture that costs $3.40 per pound?

3. A 1% solution should be mixed with a 4% solution to get 75 ml of 2% solution. How much of each must be used?

4. A 60% acid solution must be mixed with a 75% acid solution to get 20 liters of a 72% solution. How much of each must be used?

5. A candy mix sells for $2.20 per kilogram. It contains chocolates worth $1.80 per kilogram and other candy worth $3.00 per kilogram. How much of each are in 15 kilograms of the mixture?

6. How many kilograms of a 4% solution of borax and a 12% solution of borax be mixed together to obtain 3 kg of a 10% solution of borax?

7. A merchant wishes to mix candy worth $5 per pound with candy worth $2 per pound to get 60 pounds of a mixture that can be sold for $3 per pound. How many pounds of each type of candy should be used?

8. A merchant wishes to mix some candy worth $1.50 a pound with some candy worth $5.50 a pound to get 240 pounds of candy worth $3.50 per pound. How many pounds of the $5.50 candy should she use?