Name: _____   Class: _____
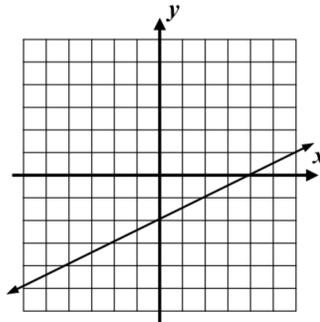
Mixture Problems

<u>Important Problems</u>
  1. A farmer has two types of milk, one that is 24% butterfat and another which is 18% butterfat. How much of each should she use to end up with 42 gallons of 20% butterfat?

  2. In a candy shop, chocolate which sells for $4 a pound is mixed with nuts which are sold for $2.50 a pound. This forms a chocolate-nut candy which sells for $3.50 a pound. How much of each are used to make 30 pounds of the mixture?

  3. A solution of pure antifreeze is mixed with water to make a 65% antifreeze solution. How much of each should be used to make 70 L?

  4. Solution A is 50% acid and solution B is 80% acid. How much of each should be used to make 100ml of a solution that is 68% acid?

  5. A lumber company wants to make an 80 pound mixture costing $2.65 per pound and consisting of oak wood chips and pine wood chips. The oak wood chips cost $3.10 per pound and the pine wood chips cost $2.50 per pound. How many pounds of each are needed?

<u>Review and Extend</u>
  1. Of 12 pounds of salt water, 10% is salt. Of another mixture, 3% is salt. How many pounds of the second mixture should be added to the first in order to get a mixture of 5% salt?

  2. Evie and her father are comparing their ages. At the current time, Evie's father is 36 years older than her. Three years from now, Evie's father will be five times her age at that point. How old is Evie now?

  3. Find the equation of the line (assume a scale of 1):

  4. Kirk is driving along a long-road at a constant speed. He is driving directly towards Denver. He knows that after 2-hours of driving he is 272 miles from Denver. After 3 and a half hours, he is 176 miles from Denver. Create an equation to show the distance, d, that Kirk is from Denver after h hours.

  5. The population of deer in a park is growing over the years. The table below gives the population found in a survey by local wildlife officials.

Year	2000	2003	2006	2009
Deer Population	168	216	264	312

Find the average rate of change over each time interval below:

(a) From 2000 to 2003   (b) From 2003 to 2006   (c) From 2006 to 2009