

Solving Mixture Problems with One Variable

Name _____

Date _____ Period _____

How many **liters** of **pure water** must be added to **40 liters** of a **25% acid solution** to produce a **10% acid solution**?

Let x = **liters of pure water**

	Liters of Solution	% of Acid	Amount of Acid (liters·%)
pure water			
25% Solution			
10% Solution			

How many **gallons** of a **70% acid solution** must be added to **50 gallons** of a **40% acid solution** to produce a **50% acid solution**?

Let x = **gallons of 70% acid solution**

	Gallons of Solution	% of Acid	Amount of Acid (gallons·%)
70% Solution			
40% Solution			
50% Solution			

How many cups of a 4% milk must be added to 20 cups of a 1% milk to produce 2% milk?

Let x = cups of 4% milk

	Cups of Milk	% of Butterfat	Amount of Fat (cup·%)
4% milk			
1% milk			
2% milk			

A store mixes peanuts worth \$2.49/pound with walnuts worth \$3.89/pound to make 100 pounds of a mixture worth \$3.19/pound. How many pounds of peanuts and walnuts are in the mixture?

Let x = pounds of peanuts

	Pounds	Cost/Pound	Total Cost (pounds·cost)
Peanuts			
Walnuts			
Mixture			

A Pharmacist wants to produce 20 grams of a 52% solution by combining a 40% solution with a 70% solution. How many grams of each solution must be mixed?

Let x = grams of 40% solution

	Grams	% Solution	Total Solution (grams·%)
40% Solution			
70% Solution			
52% Solution			