

## Malt, Sherie

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**From:** Nelson, Valerie  
**Sent:** Friday, February 06, 2015 2:35 PM  
**To:** Malt, Sherie  
**Subject:** Tech Lesson for MP2  
**Attachments:** Mixture Problem with Hyperlink.ppt

**Importance:** High

This lesson makes use of a hyperlink embedded in a powerpoint lesson.

Valerie

# Mixture Problems

# Mixture Problems

Mixture problems are problems in which two or more parts are combined into a whole.

In mixture problems, the units are usually the number of gallons or pounds and the value is the cost, value, or concentration per unit.

# Mixture Problems

Example: Retail

A tea company sells blended tea for \$25 per pound. To make blackberry tea, dried blackberries that cost \$10.50 per pound are blended with black tea that costs \$35 per pound. How many pounds of black tea should be added to 5 pounds of dried blackberries to make blackberry tea?

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Ingredients	Number of Units	Price per Unit (\$)	Total Price

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Ingredients/Mix	Number of Units	Price per Unit (\$)	Total Price
Blackberries			
Black Tea			
Blended Tea			

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Ingredients/Mix	Number of Units	Price per Unit (\$)	Total Price
Blackberries		\$10.50/pound	
Black Tea		\$35.00/pound	
Blended Tea		\$\$25.00/pound	



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Ingredients/Mix	Number of Units	Price per Unit (\$)	Total Price
Blackberries	5 pounds	\$10.50/pound	
Black Tea	X pounds	\$35.00/pound	
Blended Tea	(x + 5) pounds	\$25.00/pound	

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Ingredients/Mix	Number of Units	Price per Unit (\$)	Total Price
Blackberries	5 pounds	\$10.50/pound	$5(10.50)$
Black Tea	$X$ pounds	\$35.00/pound	$35x$
Blended Tea	$(x + 5)$ pounds	\$25.00/pound	$25(x + 5)$

# Mixture Problem Calculations

Ingredients/Mix	Number of Units	Price per Unit (\$)	Total Price
Blackberries	5 pounds	\$10.50/pound	$5(10.50)$
Black Tea	x pounds	\$35.00/pound	$35x$
Blended Tea	$(x + 5)$ pounds	\$25.00/pound	$25(x + 5)$

Set up the equation:  $5(10.50) + 35x = 25(x + 5)$

Distribute:  $52.50 + 35x = 25x + 125$

Subtract:  $52.50 - 52.50 + 35x = 25x + 125 - 52.50$

Simplify:  $35x = 25x + 72.50$

Subtract:  $35x - 25x = 25x - 25x + 72.50$

Simplify:  $10x = 72.50$

Divide:  $10x/10 = 72.50/10$

Simplify:  $x = 7.25$  pounds of Black Tea



# Mixture Problems

Solve: Coffee

Premium coffee beans cost \$9.50 per pound and Supreme coffee beans cost \$11.75 per pound. How many pounds of Premium coffee beans should be mixed with 2 pounds of Supreme coffee beans to make a blend of coffee beans that cost \$10.00 per pound?

Ingredients	Number of Units	Price per Unit (\$)	Total Price

# Mixture Problems

For more information go to the site below.

[http://www.purplemath.com/modules/mixture](http://www.purplemath.com/modules/mixture.htm)  
.htm