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

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

Example: Retail

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

Example: Retail

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

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Example: Retail

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

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

Example: Retail

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Black Tea		
Blended Tea		

Example: Retail

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

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

Example: Retail

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

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	

Example: Retail

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

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

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

Set up the equation:

5(10.50) + 35x = 25(x + 5)

Distribute

52.50 + 35x = 25x + 12552.50 - 52.50 + 35x = 25x + 125 - 52.50

Subtract:

Simplify: Subtract:

35x = 25x + 72.50 35x - 25x = 25x - 25x + 72.50

Simplify: Divide:

10x = 72.50

Simplify:

10x/10 = 72.50/10 x = 7.25 pounds of Black Tea

Solve: 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? Premium coffee beans cost \$9.50 per pound and Supreme coffee

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