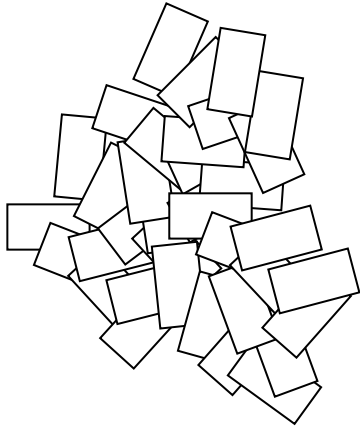


At the end of the day a cashier has a total of 103 \$1 and \$5 bills. The total value of the money is \$415. How many bills of each denomination does the cashier have?

\$1's and \$5's



103 Total Bills

\$415

	<i>Number of Bills</i>	<i>Bill Value</i>	<i>Total Value</i>
\$1's	x		
\$5's	y		
Total			

$$x + y = 103$$

$$x + 5y = 415$$

$$\begin{array}{r} (-) x + y = 103 \\ \hline \end{array}$$

$$4y = 312$$

$$y =$$

Since $x + y = 103$, we can solve for x by substituting in $y = 78$.

$$x + y = 103$$

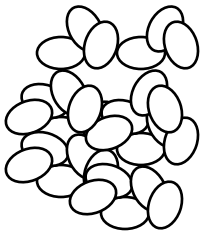
↓

$$x + 78 = 103$$

=

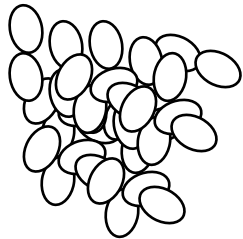
A candy store manager wishes to blend candy selling for \$1.20 per lb with candy that sells for \$1.50 per lb to get a candy mixture that will sell for \$1.35 per pound. How many pounds of the \$1.20 and \$1.50 candies should be used to get 10 lbs of the blended candy mixture?

Candy #1



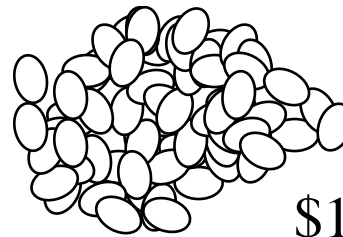
\$1.20 per lb

Candy #2



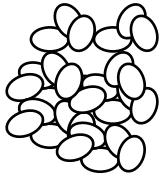
\$1.50 per lb

Blended Candy Mixture



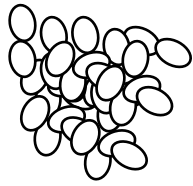
\$1.35 per lb

Candy #1



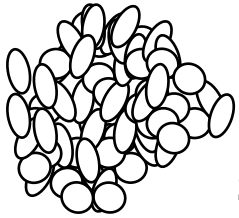
\$1.20 per lb

Candy #2



\$1.50 per lb

Blended Candy Mixture



\$1.35 per lb

	<i>Number of Pounds</i>	<i>Cost per Pound</i>	<i>Total Cost</i>
<i>Candy #1</i>	x	1.20	$1.20x$
<i>Candy #2</i>	y	1.50	$1.50y$
<i>Blended Candy</i>	10	1.35	13.50

$$1.20x + 1.50y = 13.50$$

$$10[1.20x + 1.50y] = 10[13.50]$$

$$12x + 15y = 135$$

$$x + y = 10$$

$$12[x + y] = 12[10]$$

$$12x + 12y = 120$$

$$12x + 15y = 135$$

$$\begin{array}{r} (-) 12x + 12y = 120 \\ \hline \end{array}$$

$$3y = 15$$

$$y =$$

$$x =$$

Solution: We will mix 5 lbs
Candy #1 with 5 lbs of
Candy #2, to get 10 lbs of
mixed Candy that costs
\$1.35 per pound.