

1) An orange has 30 calories more than a peach. Thirteen peaches have as many calories as 7 oranges. Find the number of calories in each fruit.

2) A carrot has 13 calories more than a celery stalk. Five carrots and ten celery stalks have only 170 calories. Find the number of calories in each vegetable.

3) 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?

1) An orange has 30 calories more than a peach. Thirteen peaches have as many calories as 7 oranges. Find the number of calories in each fruit.

	cal/fruit	#	total cal
O	$p+30$	7	$7p+210$
P	$p$	13	$13p$

$$\begin{array}{r}
 13p = 7p + 210 \\
 - 7p \quad - 7p \\
 \hline
 6p = 210 \\
 \underline{\quad 6} \\
 p = 35
 \end{array}$$

peach  $\rightarrow$  35 cal  
 orange  $\rightarrow$  65 cal

2) A carrot has 13 calories more than a celery stalk. Five carrots and ten celery stalks have only 170 calories. Find the number of calories in each vegetable.

	cal/veg	#	total cal
a	$e+13$	5	$5e+65$
e	e	10	$10e$

$$5e+65+10e=170$$

$$15e+65=170$$

$$-65 \quad -65$$

$$\hline 15e = 105$$

$$\hline 15 \quad 15$$

$$\hline e = 7$$

celery  $\rightarrow 7$  cal  
 carrot  $\rightarrow 20$  cal

3) 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?

	\$/lb	lb	total \$
blackberries	10.5	5	52.5
black tea	35	$t$	$35t$
blend	25	$5+t$	$125+25t$

$$52.5 + 35t = 125 + 25t$$

$$\begin{array}{r} 52.5 + 35t = 125 + 25t \\ -52.5 \quad -25t \quad -52.5 \quad -25t \\ \hline \end{array}$$

$$\frac{10t}{10} = \frac{72.5}{10} \quad t = 7.25$$

$$7.25 \text{ lb}$$