Warm up:

BUSINESS Party Supplies Inc. sells metallic balloons for $2 each and helium balloons for $3.50 per bunch. Yesterday, they sold 36 more metallic balloons than the number of bunches of helium balloons. The total sales for both types of balloons were $281. Let b represent the number of metallic balloons sold.

	$	#	total $
M	2	$h+36$	$2h+72$
H	3.50	h	$3.5h$

$2h+72+3.5h=281$

$5.5h+72=281$

$-72 \quad -72$

$\frac{5.5h}{5.5} = \frac{209}{5.5}$

$h = 38$

helium $\Rightarrow$ 38 bunches

metallic $\Rightarrow$ 74 balloons

The length of a red rectangle is 15cm more than its width. A blue rectangle, which is 5cm wider and 2cm shorter than the red one, has a perimeter of 72cm. What are the dimensions of each rectangle?

	l	w
R	$w+15$	w
B	$w+13$	$w+5$

$w+13+w+5+w+13+w+5=72$

$4w+36=72$

$-36 \quad -36$

$\frac{4w}{4}=\frac{36}{4}$

$w=9$

Red → 9cm × 24cm

Blue → 22cm × 14cm

CANDY A candy store wants to create a mix using two hard candies. One is priced at $5.45 per pound, and the other is priced at $7.33 per pound. How many pounds of the $7.33 candy should be mixed with 11 pounds of the $5.45 candy to sell the mixture for $6.14 per pound? (Example 1)

	$/lb	lb	total $
expensive	7.33	x	7.33x
cheap	5.45	11	59.95

$$7.33x + 59.95 = 6.14(11 + x)$$

$$7.33x + 59.95 = 67.54 + 6.14x$$

$$-59.95 \quad -59.95$$

$$7.33x = 7.59 + 6.14x$$

$$-6.14x \quad -6.14x$$

$$\frac{1.19x}{1.19} = \frac{7.59}{1.19}$$

$$x = 6.378151261..$$

$$\approx (6.3816)$$

October 6, 2021

1) Paula mixed 2 cups of sunflower seeds and 3 cups of raisins to make a snack for a hike. She figured that the mixture would provide her with 2900 calories of food energy. Find the number of calories per cup of raisins if it is 400 less than the number of calories per cup of sunflower seeds.

2) In one basketball game, Maria scored three times as many points as Holly. In the next game, Maria scored 7 fewer points than she did in the first game while Holly scored 9 more points than she did in the first game. If they scored the same number of points in the second game, how many points did each score in the first game?

1) Paula mixed 2 cups of sunflower seeds and 3 cups of raisins to make a snack for a hike. She figured that the mixture would provide her with 2900 calories of food energy. Find the number of calories per cup of raisins if it is 400 less than the number of calories per cup of sunflower seeds.

	c	cal/c	total (cal)
s	2	s	2s
r	3	s-400	3s-1200

$2s + 3s - 1200 = 2900$

$+1200 \quad +1200$

$5s = 4100$

$\frac{5s}{5} = \frac{4100}{5}$

$s = 820$

sunflower seed → 820 cal/c

raisins → 420 cal/c

2) In one basketball game, Maria scored three times as many points at Holly. In the next game, Maria scored 7 fewer points than she did in the first game while Holly scored 9 more points than she did in the first game. If they scored the same number of points in the second game, how many points did each score in the first game?

	1	2
M	$3h$	$3h-7$
H	h	$h+9$

$3h-7=h+9$
$-h \quad -7 \quad -h \quad +7$
$2h=16$
$\frac{2h}{2}=\frac{16}{2}$
$h=8$

Holly → 8 pts
Maria → 24 pts