

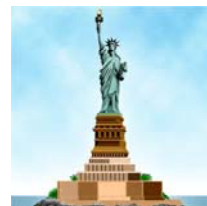
Warm-up 11/4

Solve the following systems of equations

1. $x = 2$
 $y = 6x - 11$

2. $2x - 3y = -1$
 $y = 2x - 2$

3. $y = 3x - 8$
 $y = -2x + 4$



Warm-up 11/4



Solve the following systems of equations

$(1.75, 1.5)$

1. $x = 2$
 $y = 6x - 11$ $(2, 1)$

$y = 6(2) - 11$
 $y = 12 - 11$
 $y = 1$

3. $y = 3x - 8$
 $y = -2x + 4$ $(2.4, -0.8)$

$-0.8 = 3(2.4) - 8$
 $-0.8 = 7.2 - 8$
 $-0.8 = -0.8 \checkmark$
 $-0.8 = -2(2.4) + 4$
 $-0.8 = -4.8 + 4$
 $-0.8 = -0.8 \checkmark$

2. $2x - 3y = -1$
 $y = 2x - 2$

$2x - 3(2x - 2) = -1$
 $2x - 6x + 6 = -1$

$-4x + 6 = -1$
 $-6 - 6$

 $-4x = -7$
 $-4 \quad -4$

$x = 1.75$

$y = 2(1.75) - 2$
 $y = 3.5 - 2$
 $y = 1.5$

$2(1.75) - 3(1.5) = -1$
 $3.5 - 4.5 = -1$
 $-1 = -1 \checkmark$

	Hybrid	Non-Hybrid
Car Cost	\$30,000	\$24,000
Insurance	\$1,000 per year	\$800 per year
Maintenance	\$700 per year	\$550 per year
MPG	30 mpg	20 mpg
MPY	12,000 miles/year	12,000 miles/year
Gas Price	\$2.15 per gallon	\$2.15 per gallon

25 mpg
 100 miles
 Gas \$2.15

$$\frac{100 \text{ mi}}{25 \text{ m/g}} = 4 \text{ g}$$

$$\$2.15 \times 4 \text{ g} = \$8.6$$

$$\frac{12,000 \text{ mi}}{30 \text{ mpg}}$$

$$400 \text{ gal} \times \$2.15/\text{g} = \$860/\text{year}$$

$$\frac{12,000 \text{ mi}}{20 \text{ mpg}}$$

$$600 \text{ gal} \times \$2.15/\text{gal} = \$1290$$

$$y = mx + b$$

cost per
year

(gas, ins., maint.)

cost of
the car

Hybrid

$$y = \underline{m}x + 30,000$$

/

$$2560$$

$$y = 2560x + 30,000$$

Non-Hybrid

$$y = \underline{m}x + 24,000$$

/

$$2540$$

$$y = 2540x + 24,000$$