

Please turn in your Homework before  
start your warm up

## Warm Up-

1. Evaluate the function  $y = 30x$  when:

a.  $x = 4$

$$y = 30(4) = 120$$

b.  $y = 390$

$$\frac{390}{30} = \frac{30x}{30} \quad x = 13$$

c.  $x = 20$

$$y = 30(20) = 600$$

d.  $y = 500$

$$\frac{500}{30} = \frac{30x}{30}$$

$$\boxed{x = 16.6}$$

## Homework Questions

## More Examples

1. You and your friends are taking a trip from Colorado to Paris. The airplane taking you all travels at a speed of 450 miles per hour.

a. Write an equation that relates how far you have traveled,  $y$ , to how long you have been in the plane,  $x$ .

$$y = mx$$

$$y = 450x$$

b. If it is 4,500 miles to Paris, how long will it take you guys to get to Paris?

$$y = 450x$$

$$\frac{4500}{450} = \frac{450x}{450}$$

$$x = 10 \text{ hrs}$$

c. After 5 hours have passed, how many miles have you guys traveled?

$$y = 450x$$

$$y = 450(5)$$

$$y = 2,250 \text{ miles}$$

## More Examples

1. You release a balloon straight up in to the air. The balloon rises at a rate of 18 meters every 6 seconds.

a. Write an equations that relates the height of the balloon,  $y$ , to the time since you released the balloon,  $x$ .

$$y = mx \quad y = \frac{18}{6}x \quad \boxed{y = 3x}$$

b. You notice the balloon is as far of the ground as your roof is from your house. If you know that your roof is 20 meters above the ground, how long has it been since you released the balloon.

$$y = 3x \quad \frac{20}{3} = \frac{3x}{3} \quad \boxed{x = 6.6 \text{ sec}}$$

c. If one minute has passed since you let the balloon go, how far is the balloon from the ground?

$$y = 3x$$

$$y = 3(60)$$

$$\boxed{y = 180 \text{ meters}}$$