Worksheet Chapter 2 Name _____

Direction: Write neatly; show your work in an organized fashion.

1. Solve: $-3x + 6(x + 4) = 9$	2. Solve: $3w + 7 = 2w - 5$
3. Solve: $\frac{1}{2}x - \frac{3}{5} = \frac{2}{5}$	4. Solve and graph on number line $5 - 9x \geq 19 + 5x$
5. Solve for L in $w = \frac{p+L}{2}$	**Explain your variable, write equation & solve w/ alg.** 6. In a medical study, they found 800 peopled who kissed someone with a cold. Only 56 actually caught the cold. What percent is this?
Explain your variable, write equation & solve w/ alg. 7. The perimeter of a rectangle is 36 cm. The length is 4 cm greater than the width. Find the width and length?	**Explain your variable, write equation & solve w/ alg.** 8. Kari is taking a 240-mile bicycle trip. She has three times as many miles to go as she has already ridden. How many miles has she biked so far?

Worksheet Chapter 2 **SOLUTIONS**

1. Solve: $-3x + 6(x + 4) = 9$

$-3x + 6x + 24 = 9$

$3x + 24 = 9$

$-24 \quad -24$

$\frac{3x}{3} = \frac{-15}{3}$

$x = -5$

2. Solve: $3w + 7 = 2w - 5$

$3w + 7 = 2w - 5$

$-2w \quad -2w$

$w + 7 = -5$

$-7 \quad -7$

$w = -12$

3. Solve:

$$\frac{1}{2}x - \frac{3}{5} = \frac{2}{5}$$

$$\left(\frac{10}{1}\right)\frac{1}{2}x - \left(\frac{10}{1}\right)\frac{3}{5} = \left(\frac{10}{1}\right)\frac{2}{5}$$

$$5x - 6 = 4$$

$$5x - 6 + 6 = 6 + 6$$

$$5x = 10$$

$$x = 2$$

4. Solve and graph on number line

$5 - 9x \geq 19 + 5x$ or $5 - 9x \geq 19 + 5x$

$-5x \quad -5x$ $\quad$ $+9x \quad +9x$

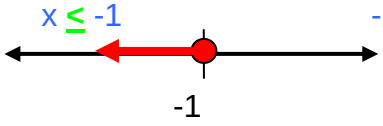
$5 - 14x \geq 19$ $\quad$ $5 \geq 19 + 14x$

$-5 \quad -5$ $\quad$ $-19 \quad -19$

$\frac{-14x}{-14} \geq \frac{14}{-14}$ $\quad$ $\frac{-14}{14} \geq \frac{14x}{14}$

$x \leq -1$ $\quad$ $-1 \geq x$

$x \leq -1$



5. Solve for L in

$$w = \frac{p + L}{2}$$

$$\left(\frac{2}{1}\right)w = \left(\frac{2}{1}\right)\frac{p + L}{2}$$

$$2w = p + L$$

$$2w - p = p - p + L$$

$$2w - p = L$$

Explain your variable, write equation & solve w/ alg.

6. In a medical study, they found 800 peopled who kissed someone with a cold. Only 56 actually caught the cold. What percent is this?

Set x = the percent.

What percent of 800 is 56?

$\frac{x(800)}{800} = \frac{56}{800}$

x = 0.07 = 7% of the people got the cold

Explain your variable, write equation & solve w/ alg.

7. The perimeter of a rectangle is 36 cm. The length is 4 cm greater than the width. Find the width and length?

Set width = w, so

length = w + 4, and

perimeter = 36 cm

P = 2w + 2l, so

36 = 2w + 2(w + 4)

36 = 2w + 2w + 8

36 = 4w + 8

$-8 \quad -8$

$\frac{28}{4} = \frac{4w}{4}$

7 cm = width

length = 7 + 4 = 11 cm

Explain your variable, write equation & solve w/ alg.

8. Kari is taking a 240-mile bicycle trip. She has three times as many miles to go as she has already ridden. How many miles has she biked so far?

Set d = the distance Kari rode so far, so

3d = the distance she has yet to go.

d + 3d = 240

$\frac{4d}{4} = \frac{240}{4}$

d = 60

Kari has biked 60 miles so far.