

Name _____

Date _____

Word Problems Leading to Inequalities - Guided Lesson Explanation

Explanation #1

let x = number of plates It can't be greater than \$60.

Mike also needs to save \$20 and spent \$12.50.

Each plate (x) is \$2.50. Let's put it all together

$$60 \geq 12.50 + 20.00 + 2.50x \quad = \quad 60 \geq 32.50 + 2.50x$$

$$27.50 \geq 2.50x \quad = \quad 11 \geq x$$

$x = 11$ Mike can buy 11 plates.

Explanation #2

$$-0.6x - 6 > -8.6$$

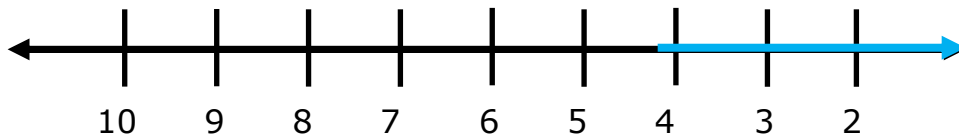
$$-0.6x > -8.6 + 6$$

$$-0.6x > -2.6 \quad (\text{When dividing by a negative, you "flip" the sign})$$

$$x < -2.6 / -0.6$$

$$x < 4.3$$

Let's put it on a number line:



Explanation #3

x = pairs of shoes

$$16 + 8x \leq 80$$

$$8x \leq 80 - 16$$

$$8x \leq 64$$

$x \leq 8$ --> 8 pairs of shoes is the most she can purchase.

