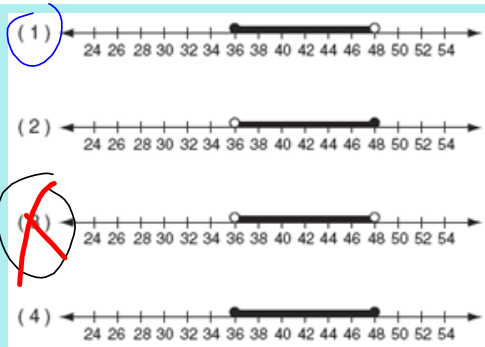


## Continuing Inequality Word Problems

Warm Up-

Complete Questions 1 and 2 on your worksheet

- 3 1) In order to be admitted for a certain ride at an amusement park, a child must be greater than or equal to 36 inches tall and less than 48 inches tall. Which graph represents these conditions?



- 2) Which statement is modeled by  $2p + 5 < 11$ ?

- (1) The sum of 5 and 2 times p is at least 11.
  - (2) Five added to the product of 2 and p is less than 11.
  - (3) Two times p plus 5 is at most 11.
  - (4) The product of 2 and p added to 5 is 11.
- Handwritten annotations: (2) is circled in blue; (3) is circled in red and crossed out with a red X.

\_\_\_\_ 3) Which is NOT a solution of the inequality  $5 - 2x \geq -3$ ?

a) 0

b) 2

c) 4

d) 5

$$4 \leq 4$$

$$\begin{array}{r} 5 - 2x \geq -3 \\ \hline \begin{array}{r} -2x \geq -8 \\ \hline x \leq 4 \end{array} \end{array}$$

\_\_\_\_ 4) Which statement can be modeled by  $x + 3 \leq 12$ ?

- a ~~m~~ Sam has 3 bottles of water. Together, Sam and Dave have at most 12 bottles of water.
- b ~~m~~ Jennie sold 3 cookbooks. To earn a prize, Jennie must sell at least 12 cookbooks.
- c ~~m~~ Peter has 2 baseball hats. Peter and his brothers have fewer than 12 baseball hats.
- d ~~m~~ Kathy swam 3 laps in the pool this week. She must swim more than 12 laps.

- 5) The sum of a number and 81 is greater than the product of  $-3$  and that number. What are the possible values for the number?

$$\begin{array}{r} x + 81 > -3x \\ -x \quad \quad \quad -x \\ \hline 81 > -4x \\ \hline -4 \quad \quad \quad -4 \end{array}$$

$-20.25 < x$   
 $x > -20.25$

- 6) Four times a number is greater than  $-48$ . What are the possible values for the number?

$$\begin{array}{r} 4x > -48 \\ \hline 4 \quad \quad \quad 4 \\ \hline x > -12 \end{array}$$

① the sum of 4 and a number  
is at most 17

$$4 + x \leq 17$$

② The product of -4 and a  
number is at least the sum  
of 3 and that number

$$-4x \geq 3 + x$$

③ The quotient of a number  
and 5 is fewer than -6.

$$\frac{x}{5} < -6$$