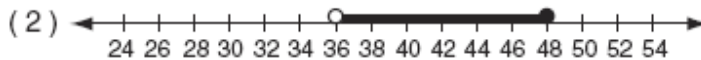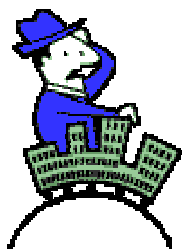**Worksheet 3.2-B- Solving Inequalities with one unknown**
Inequality Word Problem Homework   Name_____

_____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?

(1) <-+++++++++●━━━━━━━○+++++->
24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54

(2) <-+++++++○━━━━━━━●+++++->
24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54

(3) <-+++++++○━━━━━━━○+++++->
24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54

(4) <-+++++++●━━━━━━━●+++++->
24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54

_____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.

_____3) Which is NOT a solution of the inequality $5 - 2x \geq -3$?

(1) 0   (2) 2   (3) 4   (4) 5

_____4) Which statement can be modeled by $x + 3 \leq 12$?

(1) Sam has 3 bottles of water. Together, Sam and Dave have at most 12 bottles of water.

(2) Jennie sold 3 cookbooks. To earn a prize, Jennie must sell at least 12 cookbooks.

(3) Peter has 2 baseball hats. Peter and his brothers have fewer than 12 baseball hats.

(4) Kathy swam 3 laps in the pool this week. She must swim more than 12 laps.

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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?

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

7) Three times a number increased by 8 is no more than the number decreased by 4. Find the number.

8) Two-thirds of a number plus 5 is greater than 12. Find the number.