

Name: \_\_\_\_\_

Date: \_\_\_\_\_

<b>Learning Goal 6.2</b>	I can solve inequalities.
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$$8 > 2$$

greater than

- bigger # on the left

$$8 \geq 8$$

greater than or equal to

- alligator is super hungry  
 ⇒ double chin

- bigger # on the left still

$$8 \leq 8$$

less than or equal to

- bigger # is on the right

$$8 < 15$$

less than  
 - bigger # on the right

**Example** Define a variable and write an inequality for each situation.



let  $s$  = your speed  
 $s \leq 55 \text{ km/h}$



$h$  = your height  
 $h \geq 102 \text{ cm}$



$t$  = fridge temperature  
 $t < 4^\circ\text{C}$



$a$  = your age  
 $a \geq 14$

**Example** Is each number a solution of the inequality  $b \geq -4$ ? Justify your answers.

a.  $-8$

b.  $-3.5$

c.  $-4$

d.  $-4.5$

e.  $0$

is  $-8 \not\geq -4$   
false

$-3.5 \geq -4$   
true

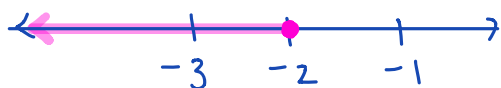
$-4 \geq -4$   
true

$-4.5 \not\geq -4$   
false

$0 \geq -4$   
true.

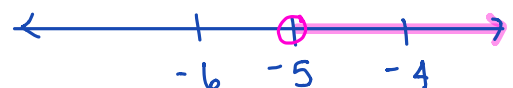
**Example** Graph each inequality on a number line. Write 4 numbers that are solutions of the inequality.

a.  $-2 \geq x$



$$x = -3, -2, -10000, -9.\bar{9}$$

b.  $t > -5$



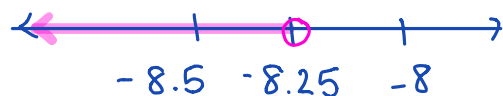
$$t = -4.9, -4, 0, 5$$

c.  $0.5 \leq a$



$$a = 1, 2, 0.5, 0.51$$

d.  $p < -8.25$



$$p = -8.26, -8.5, -10, -1000000$$