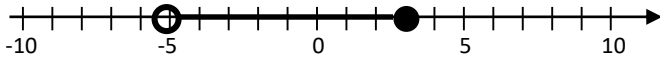


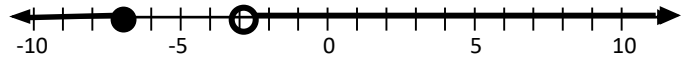
1. \*Write sets using **interval notation** for the sections of the number lines shown graphed below.

(a)



Equivalent Interval Notation: \_\_\_\_\_

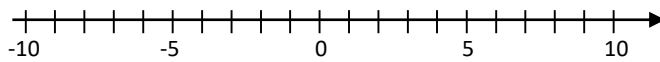
(b)



Equivalent Interval Notation: \_\_\_\_\_

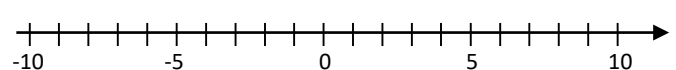
2. For each of the following, graph the portion of the number line described by the inequality and then write the equivalent using **interval notation**.

(a)  $x > 4$



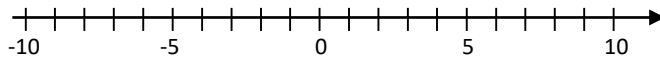
Equivalent Interval Notation: \_\_\_\_\_

(b)  $-2 \leq x < 7$



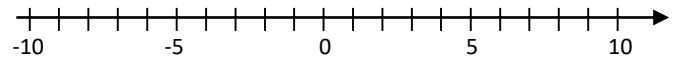
Equivalent Interval Notation: \_\_\_\_\_

(c)  $-3x + 2 < 17$



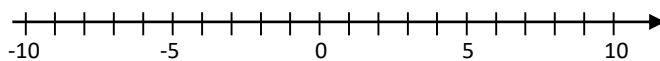
Equivalent Interval Notation: \_\_\_\_\_

\*(d)  $2x + 5 \leq -6$



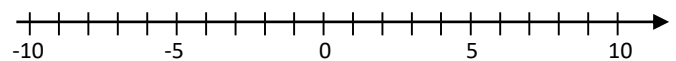
Equivalent Interval Notation: \_\_\_\_\_

(e)  $x \geq 3$  or  $x < 2$



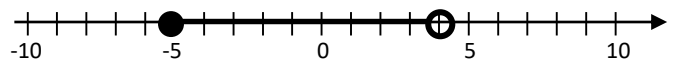
Equivalent Interval Notation: \_\_\_\_\_

\*(f)  $x \geq 4$  and  $x < -4$



Equivalent Interval Notation: \_\_\_\_\_

3. Aidan wrote the interval  $(-5, 4]$  and claimed it was equivalent to the graph below. Explain what he did wrong and correct his mistake.



-----

R1. Tanisha and Rebecca are signing up for new cellphone plans that only charge for the number of minutes and everything else is included in a monthly fee. Their plans are as follows:

Tanisha's plan: \$0.15 per minute used talking and a \$25 monthly fee.

Rebecca's Plan: \$0.10 per minute used talking and a \$18.50 monthly fee.

(a) Figure out after how many minutes the two plans will charge the same amount?

(b) Interpret your answer. It may help to read their two plans again and think about which one you would rather pay

\*R2. Simplify:  $x(x - 1) - 4(x - 1)$

\*R3. Which property of real numbers is illustrated by the equation  $4 + (5 + 6) = (4 + 5) + 6$ ?

- (1) Commutative      (2) Distributive      (3) Associative      (4) Transitive

R4. State whether the given ordered pair of numbers is a solution of the equation:  $4x + 3y = 2$ ;  $\left(\frac{1}{4}, \frac{1}{3}\right)$

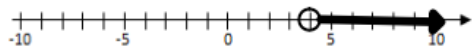
\*R5. Write a verbal expression that would translate into the following:  $6(x - 2)$

\*R6. Write a verbal expression that would translate into the following:  $\frac{6x + 3}{2}$

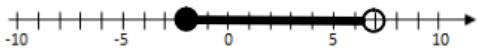
1a.  $(-5, 3]$

1b.  $(-\infty, -7]$  or  $(-3, \infty)$

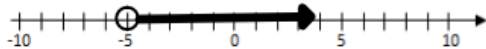
2a.  $(4, \infty)$



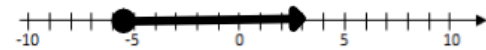
2b.  $[-2, 7)$



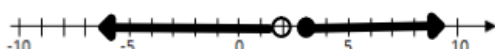
2c.  $(-5, \infty)$



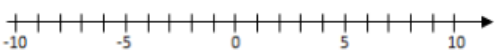
2d.  $[-5.5, \infty)$



2e.  $(-\infty, 2)$  or  $[3, \infty)$



2f. None



3.  $[-5, 4)$

R1. a.  $m = -130$ , They will never be the same.

You can't have negative minutes.

b. Rebecca's plan is always cheaper

R2.  $x^2 - 5x + 4$

R3. (3)

R4. Yes

R5. The product of six and two less than a number

R6. The quotient of the sum of six times a number and three and 2