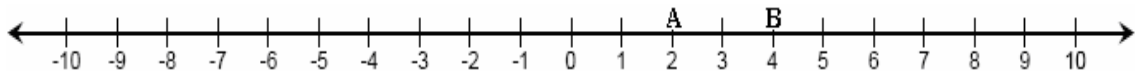
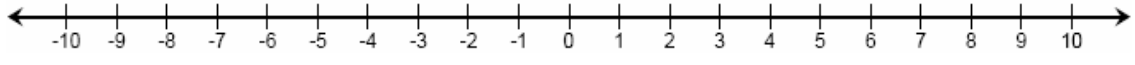
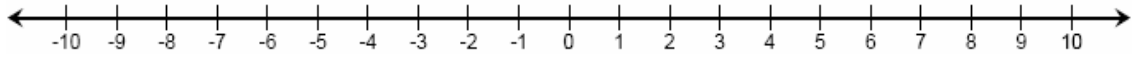
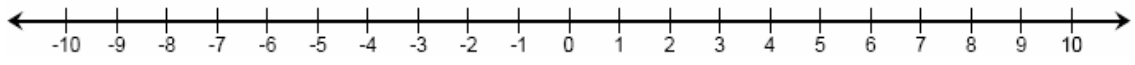
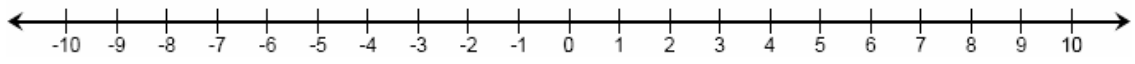
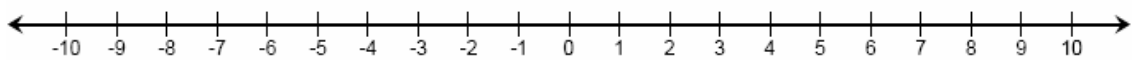
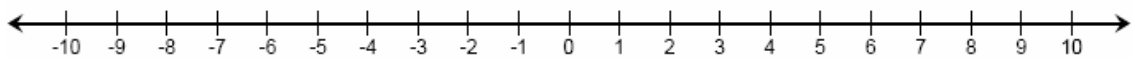
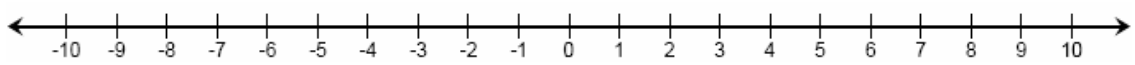
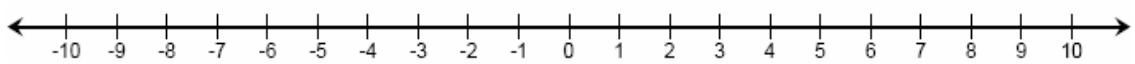
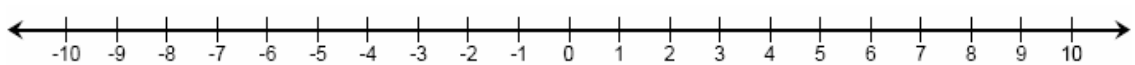
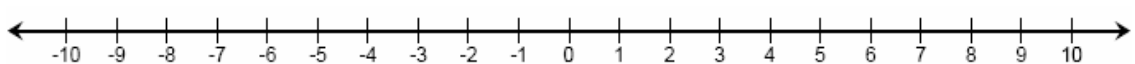
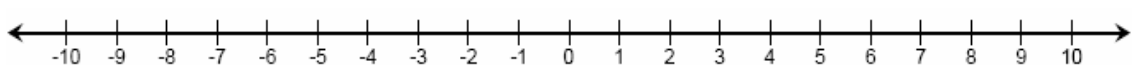


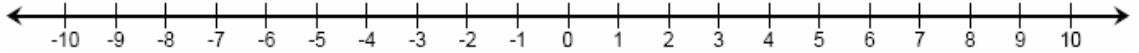
Walker A and Walker B begin at 2 and 4, respectively, and move along the number line according to the directions on the right. After each direction, write down the new position of Walker A and Walker B and fill in the blank with a less than or greater than sign. Look for patterns!

	
	$+(4)$ A ____ B
	$-(3)$ A ____ B
	$+(-5)$ A ____ B
	$-(-4)$ A ____ B
	$\times(2)$ A ____ B
	$-(-7)$ A ____ B
	$\times(-3)$ A ____ B
	$-(-5)$ A ____ B
	$\div(-4)$ A ____ B
	$-(-2)$ A ____ B
	$\times(-1)$ A ____ B

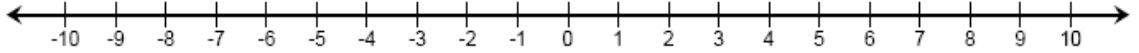
- 1) What happens to the walkers' relative positions on the number line when the operation adds or subtracts a positive number? A negative number? Does anything happen to the direction of the inequality symbol?
- 2) What happens to the walkers' relative positions on the number line when the operation multiplies or divides by a positive number? Does anything happen to the inequality symbol?
- 3) What happens to the walkers' relative positions on the number line when the operation multiplies or divides by a negative number? Does the inequality symbol change directions?
- 4) Which operations on an inequality reverse the inequality symbol? Does it make any difference which numbers you use? Consider fractions and decimals as well as integers.

Graph each inequality on the number lines.

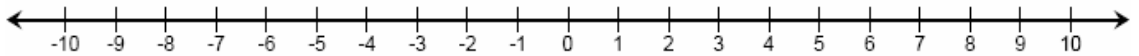
1) $t > 5$



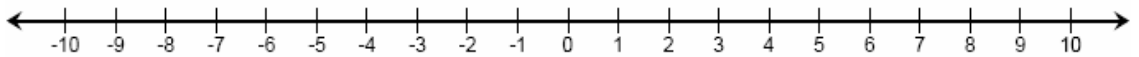
2) $a \leq -2$



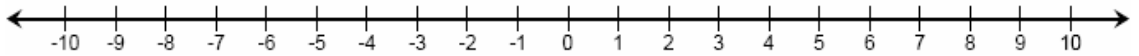
3) $j \geq 1$



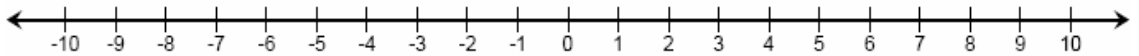
4) $-2 \leq g < 6$



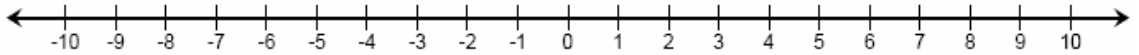
5) $e < 7$



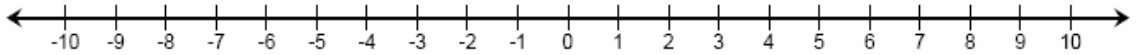
6) $s \leq -4$



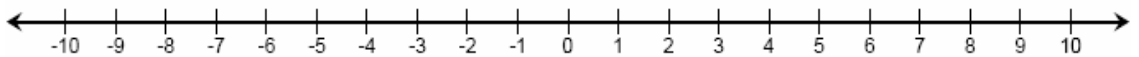
7) $-8 < h < -5$



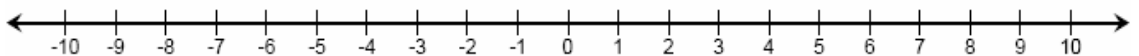
8) $d > 3$



9) $y \leq 0$



10) $a < -3$ or $a \geq 8$



Translate each phrase into symbols.

1) a is at least 5

2) b is not less than 1

3) c is no more than 2

4) d is at most 3

5) -4 is more than e

6) f is at least -2

7) g is not greater than 9

Solve each inequality for y .

1) $2x + 3y > 12$

2) $2x - 3y > 12$