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Unit 6, Lesson 15: Efficiently Solving Inequalities

1. a. Consider the inequality $-1 \leq \frac{x}{2}$.

i. Predict which values of x will make the inequality true.

ii. Complete the table to check your prediction.

x	-4	-3	-2	-1	0	1	2	3	4
$\frac{x}{2}$									

b. Consider the inequality $1 \leq \frac{-x}{2}$.

i. Predict which values of x will make it true.

ii. Complete the table to check your prediction.

x	-4	-3	-2	-1	0	1	2	3	4
$\frac{-x}{2}$									

2. Diego is solving the inequality $100 - 3x \geq -50$. He solves the equation $100 - 3x = -50$ and gets $x = 50$. What is the solution to the inequality?

- A. $x < 50$
- B. $x \leq 50$
- C. $x > 50$
- D. $x \geq 50$

3. Solve the inequality $-5(x - 1) > -40$, and graph the solution on a number line.

4. Select **all** values of x that make the inequality $-x + 6 \geq 10$ true.

- A. -3.9
- B. 4
- C. -4.01

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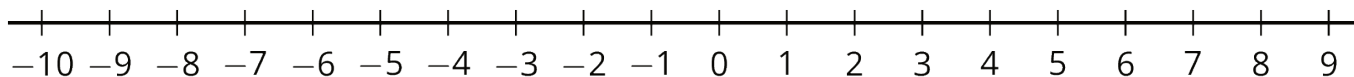
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- D. -4
- E. 4.01
- F. 3.9
- G. 0
- H. -7

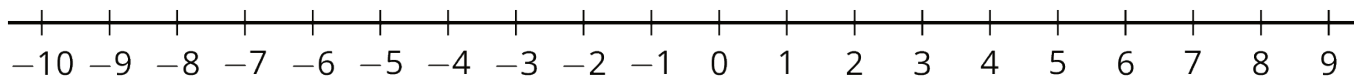
(from Unit 6, Lesson 13)

5. Draw the solution set for each of the following inequalities.

a. $x > 7$



b. $x \geq -4.2$



(from Unit 6, Lesson 13)

6. The price of a pair of earrings is \$22 but Priya buys them on sale for \$13.20.

a. By how much was the price discounted?

b. What was the percentage of the discount?

(from Unit 4, Lesson 12)