Lesson 5 Practice Problems

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. $x \geq 50$

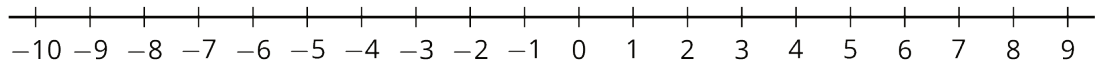3. Solve the inequality $-5(x - 1) > -40$, and graph the solution on a number line.

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

   A. -3.9

   B. 4

   C. -4.01
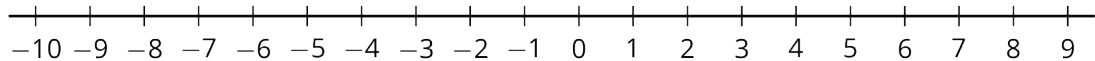
   D. -4

   E. 4.01

   F. 3.9

   G. 0

   H. -7

   (From Unit 4, Lesson 3.)

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

   a. $x > 7$

   ```
   ├──┼──┼──┼──┼──┼──┼──┼──┼──┼──┼──┼──┼──┼──┼──┼──┼──┼──┼──┤
   −10 −9 −8 −7 −6 −5 −4 −3 −2 −1  0  1  2  3  4  5  6  7  8  9
   ```

   b. $x \geq -4.2$

   ```
   ├──┼──┼──┼──┼──┼──┼──┼──┼──┼──┼──┼──┼──┼──┼──┼──┼──┼──┼──┤
   −10 −9 −8 −7 −6 −5 −4 −3 −2 −1  0  1  2  3  4  5  6  7  8  9
   ```

   (From Unit 4, Lesson 3.)

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