INEQUALITIES HW

1. Write the inequality shown on each graph.

a.

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<---+---+---+---+---+---o---+---+---+---+--->
   -4      -3      -2      -1       0       1
```

b.

```
<===+===+===+===+===+===+===●---+---+---+--->
  -50  -40  -30  -20  -10   0   10  20  30  40  50
```
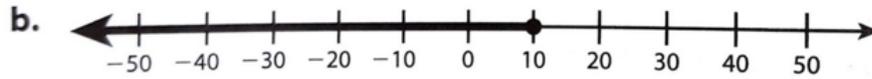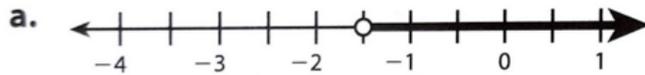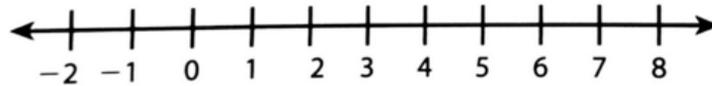
2. The children at Lincoln School go outside for recess if the temperature is 3°C or higher.
For what temperatures will the students go outside?

    a. Write an inequality to represent this situation.

    b. Graph the solution.

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<---+---+---+---+---+---+---+---+---+---+---+--->
   -2  -1   0   1   2   3   4   5   6   7   8
```
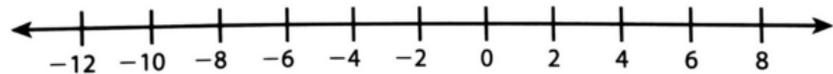
3. If your score on a computer game is less than 0, you lose your next turn.
For what scores will you lose your turn?

    a. Write an inequality to represent this situation.

    b. Graph your solution.

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<---+---+---+---+---+---+---+---+---+---+---+--->
  -12  -10  -8   -6   -4   -2   0   2   4   6   8
```

4. You must spend at least $10 at the grocery store to get a free watermelon.

    a. Write an inequality to represent the amount you need to spend to get a free watermelon.

    b. Graph the solution on a number line.

    c. If you spend $9.50, will you get a free watermelon? Use the graph to explain how you know.

5. Kiara is scuba diving. She will not dive below –30 meters relative to the surface of the water.

    a. Write an inequality that represents this situation.

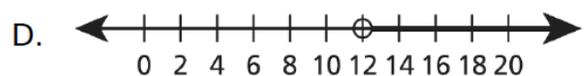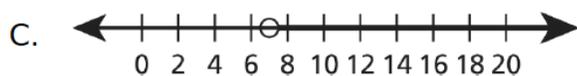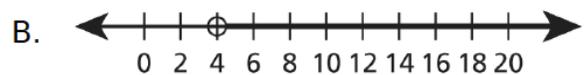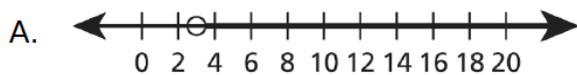   **b.** Is -20 a solution to the inequality? Explain how you know.

6. Marcos looks at the graph below and says that –1 is the only possible negative solution. Do you agree or disagree? Explain.
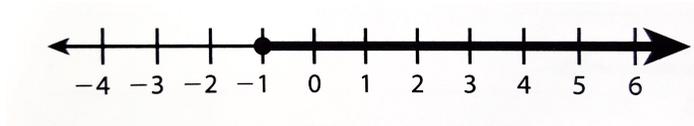
7. Andre wants to spend no more than \$15 each week on lunch. Let x represent the amount of money he spends each week on lunch. Which inequality represents the situation?

    A. $x < 15$
    B. $x > 15$
    C. $x \leq 15$
    D. $x \geq 15$

8. A printer makes more than 3 copies of a book every hour. Which graph represents the number of books made in 4 hours?

A.
    0 2 4 6 8 10 12 14 16 18 20

B.
    0 2 4 6 8 10 12 14 16 18 20

C.
    0 2 4 6 8 10 12 14 16 18 20

D.
    0 2 4 6 8 10 12 14 16 18 20

9. Which of these values is a solution to the inequality $x - 1 \geq 6$? Select all that apply.

    A. 7
    B. $3\frac{1}{2}$
    C. 2.5
    D. 10

10. Consider the inequality $x > -0.75$. Tell whether each statement is **True** or **False**.

    a. -0.75 is a solution to the inequality.

    b. There are many solutions to this inequality.

    c. All of the solutions to the inequality are negative.

    d. The inequality $-0.75 < x$ is equivalent to the given inequality.

    e. -4.5 is a solution to the inequality.