Unit: Inequalities
Student Handout 1

Name _____

Date _____ Pd _____

INTRO TO INEQUALITIES

An equation uses an _____ sign to show that both sides are _____ .

An _____ shows that both sides may _____ be equal.

GREATER THAN	GREATER THAN OR EQUAL TO	LESS THAN	LESS THAN OR EQUAL TO

Use an inequality symbol to make each mathematical statement true.

4 ___ 9	0.5 ___ 0.45	-3 ___ -2	1.04 ___ 1.4

INEQUALITIES

- Use the _____ as the starting point when reading an inequality statement.

Ex: $6 \leq x$ can be rewritten as _____

- A value can be substituted to determine if the inequality is correct.

Ex: $x + 6 > 11$, if $x = 5$ $7x < 45$, if $x = 6$

Determine whether the given value makes a true statement.

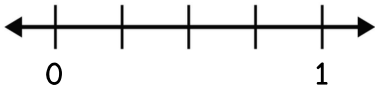
1. $\frac{x}{q} \leq 3$, if $x = 27$	2. $12h > 36$, if $h = 3$	3. $18 < a + 12$, if $a = 7$
4. $12 \geq -4c$, if $c = -4$	5. $\frac{x}{-2} > 5$, if $x = 12$	6. $-5 + w \geq -8$, if $w = 2$

GREATER THAN	GREATER THAN OR EQUAL TO	LESS THAN	LESS THAN OR EQUAL TO
⟷	⟷	⟷	⟷

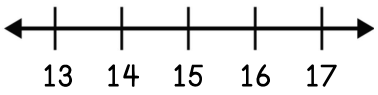
Practice graphing the following inequalities.

7. $k > -5$

8. $\frac{1}{2} \geq f$



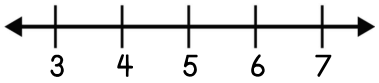
9. $d < 16$



SOLUTION SET

- All the shaded numbers _____ the inequality or are part of the solution set.

Ex: $b \geq 6$



For 10-12, determine if the given values are included in the solution set. For 13-16, write and graph the inequalities.

10. $a < 0.25$

a. $\frac{1}{4}$ _____

b. 0.75 _____

11. $\frac{1}{2} > k$

a. $\frac{1}{4}$ _____

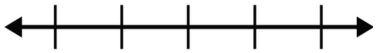
b. $\frac{3}{7}$ _____

12. $b \geq -0.25$

a. -0.75 _____

b. $-\frac{1}{5}$ _____

13. La'Darian spends at least 30 minutes, m, practicing the trumpet each day.



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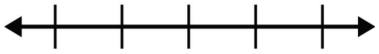
14. It took Davis less than 20 minutes, m, to finish his homework.



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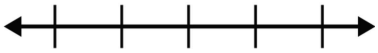
15. Cora spent over $100 on video games, v.

_____

16. Eliana guessed on a maximum of 3 questions, q, on the science test.



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17. Cristina says that the graph for the inequality $r < -5$ will be the same as the graph for the inequality $-5 > r$. Do you agree or disagree? Justify your reasoning.

_____

_____

_____

Unit: Inequalities
Homework 1

Name _____

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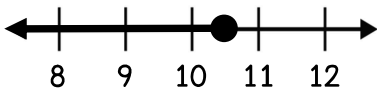
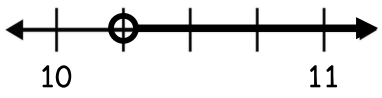
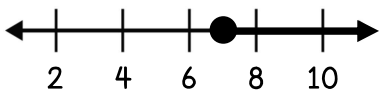
INTRO TO INEQUALITIES

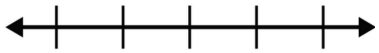
Substitute each variable to determine whether the inequality statement is true or false.

1.	2.	3.
$5 \leq 12 - m$, if $m = 8$	$\frac{j}{6} > 3$, if $j = 24$	$-3a < -5$, if $a = 2$

In questions 4-6, write an inequality statement to match the graph. In 7-8, write and graph each inequality.

4.	5.	6.
_____ 	_____ 	_____ 

7. Each table at Joe's Burgers receives service in less than 5 minutes, m.



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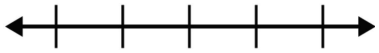
8. Grayson can spend a maximum of 3 hours, h, watching television on the weekend.



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Use your understanding of inequalities to answer the questions below.

9. Mrs. Coffer gave her students the inequality shown. She then asked them to write values that were part of the solution set. Shade the values that are in the solution set.

$8 < x$

5 | -3 | 7.5 | 0 | 15 | -9 | 21

10. Which of the inequalities below does not include $c = 0.5$ as part of the solution set?

$c > 50$ | $\frac{1}{2} < c$ | $13 \geq c$ | $7.5 \leq c$

$c < -1$ | $c < 2.5$ | $-6 \geq c$ | $c \leq \frac{1}{2}$