

learning focus:

- ✓ solve two-step inequalities and represent the solution on a number line
- ✓ interpret the solution of an inequality
- ✓ write and solve two-step inequalities that represent a real-world situation

INEQUALITIES UNIT

7 DAY CCSS-ALIGNED UNIT



INEQUALITIES



a 7 day CCSS-aligned unit
CCSS: 7.EE.4, 7.EE.4b

ready-to-go, scaffolded
student materials

INEQUALITIES UNIT

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INEQUALITIES

7th
GRADE

a 7 day CCSS-aligned unit
CCSS: 7.EE.4, 7.EE.4b

student friendly + real-world
application

use of grade
level modeling

Unit: Inequalities
Student Handout 2

Name _____
Date _____ Pd _____

ONE-STEP INEQUALITIES

- Inequalities can be solved by following the same steps as equations.
- The _____ must be alone on one side of the inequality.
- Isolate the operation.
- Whatever _____
- When you multiply sign is _____

Solve each inequality, check your answer.

1. $n + 5 \leq 16$ **CHECK & GRAPH**

3. $12g < -48$ **CHECK & GRAPH**

5. $\frac{p}{3} > 9$ **CHECK & GRAPH**

Unit: Inequalities
Homework 2

Name _____
Date _____ Pd _____

ONE-STEP INEQUALITIES

Solve the following one-step inequalities, check your work, and graph the solution.

7. $-7x \geq 35$

8. $x - 16 < 11$

9. $8 \geq x + 10$

10. The number line below represents _____

Use your understanding of solving inequalities to answer the questions below.

11. Kevin was asked to place a check mark next to the inequality that is true. Check over his work.

QUESTION #1 ☒ $25 < 5x$

QUESTION #2 ☒ $x - 3 \leq 8$

12. Each of the students below made a true statement.

CASSIE
You can rewrite the problem to be $8x > 72$.

Summarize today's lesson:

Unit: Inequalities
Homework 2

Name _____
Date _____ Pd _____

ONE-STEP INEQUALITIES

Solve the following one-step inequalities, check your work, and graph the solution.

1. $3x < 54$

2. $\frac{x}{4} \geq 11$

3. $x - 7 > 29$

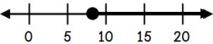
✓ CHECK:

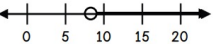
Use your understanding of inequalities to answer the questions below.

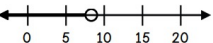
4. Which inequality is true when $x = 4$?

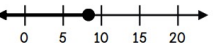
A. $x + 5 \leq 3$ B. $9x > 36$ C. $\frac{x}{2} < 3$ D. $18 \leq x - 8$

5. Jasmine solves the equation $15x > 120$. Which number line below represents the solution set?


A. 

B. 

C. 

D. 

6. The number line below represents the solution set to which inequality?



A. $16 + x < 23$ B. $5x \geq 35$

C. $x - 3 \leq 4$ D. $\frac{x}{2} > 3.5$

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higher level
analysis

INEQUALITIES



a 7 day CCSS-aligned unit
CCSS: 7.EE.4, 7.EE.4b

streamline your planning
process with unit overviews

INEQUALITIES OVERVIEW



STANDARDS

7.EE.4 Use variables to represent quantities in real-world or mathematical problems, and construct simple equations and inequalities to solve problems by reasoning about the quantities.

7.EE.4b Solve word problems leading to inequalities of the form $px + q > r$ or $px + q < r$, where p , q , and r are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem.



key vocabulary



vertical alignment



sample
pacing
calendar

BIG IDEAS

- An inequality represents two
- An inequality has infinitely n

ESSENTIAL QUESTION

- How does a graph on a num
- What process can you use t
- What patterns do you notice

INEQUALITIES PACING GUIDE



DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
Intro to Inequalities	One-Step Inequalities	Two-Step Inequalities	Inequalities Quiz	Writing Inequalities
Student Handout 1 Homework 1	Student Handout 2 Homework 2			
DAY 6	DAY 7			
Application of Inequalities	Inequalities Unit Study Guide			
Student Handout 5 Homework 5	Unit Study Guide			

INEQUALITIES OVERVIEW



TOPIC	TEACHING TIPS
One-Step Inequalities	<ul style="list-style-type: none">• Hopefully, this is a bit of review from solving one-step equations. Focus on students dividing and multiplying by a negative number and the change of the inequality symbol. Consider having students solve the problem without changing the symbol and then testing the solution. See if students can connect the negative sign to the term opposite.
Two-Step Inequalities	<ul style="list-style-type: none">• Most mistakes come from integer and rational number operations. In order to keep work neat and organized, some students might find it helpful to draw a line down the inequality symbol and keep work organized on each side.
Writing Inequalities	<ul style="list-style-type: none">• Typically, inequalities are more difficult because of the vocabulary required. Though it is helpful for them to use a chart or notes, it can be beneficial to have them think about the context of the problem using these three questions:<ol style="list-style-type: none">1. Can it be equal to the value?2. Can it be more than the value?3. Can it be less than the value?• It is also always helpful to relate it back to something they are very comfortable with (e.g. money, grades).
Graphing Inequalities	<ul style="list-style-type: none">• Once a student has graphed their solution, encourage them to test a number on the number line that is included. Practice substituting a number back into the inequality.

teaching
ideas



INEQUALITIES



a 7 day CCSS-aligned unit
CCSS: 7.EE.4, 7.EE.4b

unit study guide + assessments



quizzes



editable unit test

Unit: Inequalities
Quiz 1

NAME _____
DATE _____ Pd _____

QUIZ: INEQUALITIES

Match each of the following inequality statements to the appropriate graph.

1. $x > 6.5$

2. $\frac{1}{2} \geq x$

3. $6.5 > x$

4. $x > -\frac{1}{2}$

Evaluate whether each value makes a true statement.

5. $k + 6 \geq 19$, if $k = 11$

Solve each inequality below.

7. $6x - 18 \leq 27$

Unit: Inequalities
Review

NAME _____
DATE _____ Pd _____

INEQUALITIES UNIT STUDY GUIDE

Solve each of the problems below. These represent the types of questions on your test. Be sure to ask questions if you need more help with a topic.

I CAN SOLVE ONE-STEP INEQUALITIES.

1. $9p < -81$

2. _____

3. _____

I CAN SOLVE TWO-STEP INEQUALITIES.

4. $-3x - 11 > 45$

5. _____

7. $30 < 2x - 6$

8. _____

10. Eduardo solved the inequality below. He got $x \geq -4$. He is not sure if he is correct. Explain his mistake. Graph the correct solution.

$-14 - 4x \geq -30$
 $-4x \geq -16$
 $x \geq -4$

SEVENTH GRADE CURRICULUM

INEQUALITIES

UNIT THREE: ANSWER KEYS

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answer keys
included

