Lesson 7-4 · Session 1

Comparing Numbers on a Number Line

Name _____ Date _____ Period _____

Maryland Standard 6.NOS.8 · Learning target — I can compare two rational numbers using their positions on a number line.
Show a model, calculation, or explanation. Answer every part and label units when needed.

Exercises 1–12 earn 1 point for a correct response and 1 for supporting work. Spiral Review and Test Practice earn 1 point each.

Learn from a model

REMEMBER

- On a number line, numbers to the RIGHT are always greater than numbers to the LEFT.
- This is true even for negative numbers: −2 is greater than −8 because it is farther right.
- Watch out — on the negative side, a bigger digit means a smaller number.
- Check it — sketch the number line and read left to right; the order is least to greatest.

WORKED EXAMPLE

Comparing Two Scores on a Number Line In a quiz game Dana scored −1.25 points and Eli scored −0.75 points. Whose score was greater?

Step 1 Plot both numbers. Mark quarters between the integers so each point lands exactly.

Step 2 Find which point sits farther right. −0.75 sits right of −1.25

Step 3 On a number line, right always means greater and left always means less.

Step 4 Write the comparison with a symbol: −0.75 > −1.25

Answer −0.75 > −1.25, so Eli's score was greater.

Practice

1. Compare using < or >: −3 _____ -7

Answer _____

SHOW YOUR THINKING

2. Compare using < or >: 4 _____ -4

Answer _____

SHOW YOUR THINKING

3. Order from least to greatest: −5, 2, −1, 0, −6

Answer _____

SHOW YOUR THINKING

4. Compare each pair using < or >.

a. −9 _____ −4
b. 0 _____ −6
c. −2.5 _____ −2.05
d. −18 _____ 1
e. Which is greater, −30 or −13? _____

Answer _____

SHOW YOUR THINKING

5. Two Freezers. Freezer A holds at −22 degrees and Freezer B holds at −16 degrees. Write a true comparison using > or <, then name the colder freezer.

Answer _____

RECORD YOUR RESPONSE

6. Two Caves. One cave floor sits at −47 meters and another sits at −38 meters. Write a true comparison using > or <, then name the deeper floor.

Answer _____

RECORD YOUR RESPONSE

7. Score Sheet. Four players ended a round at −7, 3, −12, and 0 points. Plot all four scores on one number line, then name the greatest score and the least score.

Number line. Use the line below.



Answer _____

RECORD YOUR RESPONSE

8. Wes wrote −55 > −9, because 55 is a bigger number than 9. Explain the mistake, then write the correct comparison.

Answer _____

EXPLAIN WITH MATHEMATICAL EVIDENCE

9. Write < or > between −7 and −3.

Answer _____ the inequality

SHOW YOUR THINKING

10. Which is greater, −2.75 or −2.25? Explain.

Answer _____ the greater number and why

EXPLAIN WITH MATHEMATICAL EVIDENCE

11. Two Depths. One sensor reads −14.5 m and another reads −6.25 m. Which is higher, and write an inequality.

Answer _____ the answer and the inequality

SHOW YOUR THINKING

12. Find the Mistake. Kai says −8 is greater than −3 because 8 is greater than 3. Explain the mistake.

Answer _____ the mistake

EXPLAIN WITH MATHEMATICAL EVIDENCE

Spiral review

13. From Lesson 7-3 Session 1. Find |−45|.

Answer _____

SHOW YOUR THINKING

14. From Lesson 6-6 Session 1. Simplify 9c + 2 + c.

Answer _____

SHOW YOUR THINKING

15. From Lesson 4-2 Session 1. Write 1/2 as a percent.

Answer _____

SHOW YOUR THINKING

Test practice

16. Which symbol makes −12 ___ −5 true?

□ A. <	□ B. >
□ C. =	□ D. none

17. Which number is least?

□ A. −2.5	□ B. −6.5
□ C. 0	□ D. 3.5

18. Between two negative numbers, the greater one is —

- □ A. the longer one
- □ B. farther from zero
- □ C. closer to zero
- □ D. always −1

Check and revise

CHECK YOUR MATHEMATICS	HOW DID IT GO?
Compare the actual values, especially when both are negative. Every part answered / Work shown / Units labeled when needed	I can do this: Independently / With a hint / With help Question to revisit: _____

One correction or question I want to discuss: _____

Check signs, scale, and labels. Use a number line or coordinate grid to verify one response.