

Just In Time Quick Check
Standard of Learning (SOL) 7.1c

Strand: Number and Number Sense

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The student will compare and order rational numbers.

Grade Level Skills:

- Compare and order no more than four rational numbers expressed as integers, fractions (proper or improper), mixed numbers, decimals, and percents. Fractions and mixed numbers may be positive or negative. Decimals may be positive or negative and are limited to the thousandths place. Ordering may be in ascending or descending order.

Just in Time Quick Check

Just in Time Quick Check Teacher Notes

Supporting Resources:

- VDOE Mathematics Instructional Plans (MIPS)
 - [7.1c - Ordering Fractions, Decimals, and Percents](#) (Word) / [PDF Version](#)
- VDOE Algebra Readiness Formative Assessments
 - [SOL 7.1c](#) (Word) / [PDF](#)
- VDOE Algebra Readiness Remediation Plans
 - [Zero, Half, Whole?](#) (Word) / [PDF](#)
- VDOE Word Wall Cards: Grade 7 ([Word](#)) | ([PDF](#))
 - Rational Numbers
 - Comparing Rational Numbers
- Other VDOE Resources
 - [7.1c – Rational Numbers on the Number Line \[eMediaVA\]](#) [Slides 3 and 4]

Supporting and Prerequisite SOL: [6.2a](#), [6.2b](#), [6.3b](#), [5.2a](#), [5.2b](#)

SOL 7.1c -Just in Time Quick Check

- 1) Arrange the four numbers shown from least to greatest.

$$\sqrt{25}, \quad 3.0, \quad 250\%, \quad -\frac{15}{4}$$

_____ , _____ , _____ , _____

- 2) Arrange the four numbers shown from greatest to least.

$$-1.25, \quad -\frac{3}{10}, \quad -1\frac{2}{5}, \quad -0.03$$

_____ , _____ , _____ , _____

- 3) Arrange the numbers shown in ascending order.

$$1\frac{4}{5}, \quad \frac{9}{2}, \quad 32\%$$

_____ , _____ , _____

- 4) Determine if the following statements are true or false. Justify your reasoning for each statement.

Statement	True or False	Justify Reasoning
$1.34\% = 1.34$		
$1.\bar{4} > \frac{7}{5}$		
$0.478 < 47.8\%$		

SOL 7.1c - Just in Time Quick Check Teacher Notes

Common Errors/Misconceptions and their Possible Indications

- 1) Arrange the four numbers shown from least to greatest.

$$\sqrt{25}, \quad 3.0, \quad 250\%, \quad -\frac{15}{4}$$

A common error students may have is ignoring the negative before $-\frac{15}{4}$ and treating it as a positive number. This error may indicate a need to revisit comparing integers. Teachers are encouraged to refer to the Grade 6 Curriculum Framework (see SOL 6.3b).

A common misconception that students may have is thinking that 250% is 0.250. This may indicate a need to revisit converting between percents and decimals. Teachers are encouraged to refer to the Grade 6 Curriculum Framework (see SOL 6.2a).

- 2) Arrange the four numbers shown from greatest to least.

$$-1.25, \quad -\frac{3}{10}, \quad -1\frac{2}{5}, \quad -0.03$$

A common misconception that students may have is thinking that $-1\frac{2}{5}$ is the greatest value because it has the largest absolute value and/or the student treats the numbers as if they are all positive. This may indicate a need to revisit comparing integers; or, this may also indicate that students may need additional practice comparing and ordering rational numbers using number lines or concrete manipulatives. Teachers are encouraged to refer to the Grade 6 Curriculum Framework (see SOL 6.3b).

Another misconception students may have is thinking $-\frac{3}{10}$ is greater than -0.03 because $-\frac{3}{10}$ equals -0.3 and therefore has one digit after the decimal compared to the two digits after the decimal in -0.03. This misconception may indicate that a student has not yet developed an understanding of comparing decimal numbers. Teachers may want to provide students with grid paper or a place value chart to ensure that students align the numbers by the appropriate place value in order to compare them. With grid paper, this can be done by stacking each value in different rows and aligning the decimal points on one vertical line. It may also benefit students for the teacher to encourage students to say decimal numbers formally as “negative three hundredths” instead of “negative zero point zero three.”

- 3) Arrange the numbers shown in ascending order.

$$1\frac{4}{5}, \quad \frac{9}{2}, \quad 32\%$$

A common misconception students may make is confusing the vocabulary words ascending and descending. If students list the values in order from greatest to least, it may indicate a need to revisit vocabulary. Consider exploring the words ascending and descending in a real world context such as when a plane takes off and ascends into the air and then descends to land.

- 4) Determine if the following statements are true or false. Justify your reasoning for each statement.

Statement	True or False	Justify Reasoning
$1.34\% = 1.34$		
$1.\bar{4} > \frac{7}{5}$		
$0.478 < 47.8\%$		

Statement $1.34\% = 1.34$: A common error students may make is assuming this statement is true because they ignore the percent symbol. This may indicate a need to revisit converting between percents and decimals. Teachers are encouraged to refer to the Grade 6 Curriculum Framework (see SOL 6.2a).

Statement $1.\bar{4} > \frac{7}{5}$: A common error students may make is assuming this statement is false because they ignore the repeating symbol and think the two values are equal. This misconception may indicate that a student has not yet developed an understanding of comparing decimal numbers. Refer to question 2 for teacher notes to support students.

Statement $0.478 < 47.8\%$: A common error students may make is thinking 47.8% is equivalent to 4780 because they moved the decimal point the wrong way. This may indicate that students need more practice converting between percents and decimals and understanding that percent means a part of 100. Students may benefit from additional practice representing and modeling decimals and percents on a 10 by 10 grid.