# Just In Time Quick Check
## Standard of Learning (SOL) 5.2b

| **Strand:** Number and Number Sense |
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**Standard of Learning (SOL) 5.2b**
*The student will compare and order fractions, mixed numbers, and/or decimals, in a given set, from least to greatest and greatest to least.*

**Grade Level Skills:**
- Compare and order from least to greatest and greatest to least a given set of no more than four decimals, fractions (proper or improper), and/or mixed numbers with denominators of 12 or less.
- Use the symbols >, <, =, and ≠ to compare decimals through thousandths, fractions (proper or improper fractions), and/or mixed numbers, having denominators of 12 or less.

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## Just in Time Quick Check Teacher Notes

**Supporting Resources:**
- VDOE Mathematics Instructional Plans (MIPS)
  - 5.2ab - Order Up! Equivalences and Ordering Fractions and Decimals (Word) / PDF Version
- VDOE Algebra Readiness Formative Assessments
  - SOL 5.2b (Word) / PDF
- VDOE Word Wall Cards: Grade 5 (Word) | (PDF)
  - Mixed Number
  - Equivalent

**Supporting and Prerequisite SOL:** 5.2a, 4.1b, 4.2a, 4.2b, 4.3c, 4.3d, 3.1c, 3.2c

# SOL 5.2b - Just in Time Quick Check

1. Place the following fractions in order from greatest to least:   $\frac{1}{9}$   $\frac{1}{2}$   $\frac{1}{8}$

2. Place the following decimals in order from least to greatest:

   0.9      0.098   0.88

3. What is a number that could be placed in the blank to complete this set from least to greatest? Explain your thinking.

   $$\frac{2}{5}, .5, \underline{\qquad}, \frac{6}{8}$$

4. On picture day, the students are placed in order from tallest to shortest. Place the following students in order from tallest to shortest.
   - Javien is $4\frac{2}{3}$ feet tall
   - Danny is $3\frac{11}{12}$ feet tall
   - Samiya is $4\frac{1}{6}$ feet tall
   - Taylor is $4\frac{7}{8}$ feet tall

5. Place the following fractions and decimals in order from least to greatest:

   $\frac{12}{5}$          $3\frac{1}{3}$          $3\frac{1}{8}$          3.09

6. Use the symbol <, >, or = to compare the two fractions below.  Explain your thinking.

   $$\frac{3}{4} \underline{\qquad} \frac{7}{8}$$

# SOL 5.2b - Just in Time Quick Check Teacher Notes
## Common Errors/Misconceptions and their Possible Indications

1.  Place the following fractions in order from greatest to least: $\frac{1}{9}$ $\frac{1}{2}$ $\frac{1}{8}$

    *Students may have the misconception that a larger denominator indicates larger pieces. Experiences using concrete or pictorial models to represent fractions may help these students develop the understanding that the pieces become smaller as the denominator gets larger. Students can also use models to see how far these fractions are from the whole. Have students place fractions on a number line using benchmarks such as closer to $0, \frac{1}{2}$, or 1 to help them visualize and compare the fractions.*

2.  Place the following decimals in order from greatest to least:

    0.9    0.098   0.88

    *Students may order the decimals by looking at the digits and not the place value of the digits. A student may think that 0.098 is bigger than 0 .9 because 98 is bigger than 9. This common error may indicate that the student needs more experiences with decimal place value and understanding that the thousandths are smaller than hundredths, and so forth. To help students compare the value of decimals through the thousandths place, use manipulatives, such as place value mats or charts, decimal grids, base ten blocks, and money. Another strategy would be to encourage students to take all decimals to the same place value by adding zeros to aid in comparing.*

3.  What is a number that could be placed in the blank to complete this set from least to greatest?

    $\frac{2}{5}$ , .5, _____ , $\frac{6}{8}$

    *A student may have difficulty with this question if they are unsure of fraction and decimal equivalencies. Students may need additional instruction in decimal and fraction equivalency before they are able to successfully order fractions and decimals.*

    *The student may also struggle because the numbers are all close to $\frac{1}{2}$. Students can use a blank number line to order fractions and decimals of their choice. This will be helpful when it is time for them to determine the missing number in the set. When comparing and ordering fractions and decimals, students can defend their answer and the strategy they used. Whether they use a number line, models, benchmarks or equivalent fractions, this can be helpful when they justify their answer. Knowing that the number that they are choosing must be greater than a half could be helpful when they select their answer. The student just needs to make sure it is also less than the fraction that comes after the missing number in the set.*

4.  On picture day, the students are placed in order from tallest to shortest. Place the following students in order from tallest to shortest.
    *   Javien is $4\frac{2}{3}$ feet tall
    *   Danny is $3\frac{11}{12}$ feet tall
    *   Samiya is $4\frac{1}{6}$ feet tall
    *   Taylor is $4\frac{7}{8}$ feet tall

*For this question, both Danny and Taylor are 1 part away from the whole in their fraction, so students may think they are equivalent fractions. One strategy is to look at the whole number in the mixed fraction, Danny is 3 feet whereas Taylor is 4 feet. Students should use a number line that goes beyond 1 whole to practice this. A student may struggle with transitioning from the student's name to the fraction or vice versa when answering this question. During class, have students practice both ways of placing numbers in order from least to greatest and greatest to least.*

5. Place the following fractions and decimals in order from least to greatest:

$$\frac{12}{5} \qquad 3\frac{1}{3} \qquad 3\frac{1}{8} \qquad 3.09$$

*Students may have misconceptions about improper fractions. These misconceptions may include thinking that anything written in fraction form must be smaller than a whole.*

*Students may benefit from practice using concrete or pictorial models to show the relationship between a mixed number and an improper fraction. Students may also benefit from thinking about benchmarks when placing numbers on a number line.*

*If students struggle with placing the decimal, it may help to provide students with opportunities to compare decimals through the thousandths place using place value mats, base ten blocks, number lines, and 10 by 10 grids.*

6. Use the symbol <, >, or ≠ to compare the two fractions below, explain your thinking.

$$\frac{3}{4} \underline{\qquad} \frac{7}{8}$$

*Students may find comparing two fractions that are both 1 piece away from the whole challenging. To practice comparing fractions, students can use concrete materials, pictorial models and number lines. It may also be helpful to have students practice finding equivalent relationships with common denominators with and without using models.*