

Just In Time Quick Check
Standard of Learning (SOL) 6.2a

Strand: Number and Number Sense

Standard of Learning (SOL) 6.2a

The student will represent and determine equivalencies among fractions, mixed numbers, decimals, and percents.

Grade Level Skills:

- Represent ratios as fractions (proper or improper), mixed numbers, decimals, and/or percents.
- Determine the decimal and percent equivalents for numbers written in fraction form (proper or improper) or as a mixed number, including repeating decimals.
- Represent and determine equivalencies among decimals, percents, fractions (proper or improper), and mixed numbers that have denominators that are 12 or less or factors of 100.

Just in Time Quick Check

Just in Time Quick Check Teacher Notes

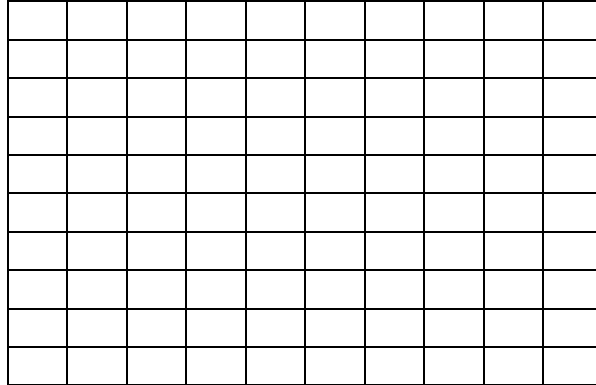
Supporting Resources:

- VDOE Mathematics Instructional Plans (MIPS)
 - [6.2a - Rational Speed Match](#) (Word) / [PDF](#)
- VDOE Co-Teaching Mathematics Instruction Plans (MIPS)
 - [6.2ab - Order Rational Numbers](#) (Word) / [PDF](#)
- VDOE Algebra Readiness Formative Assessments
 - [SOL 6.2a](#) (Word) / [PDF](#)
- VDOE Algebra Readiness Remediation Plans
 - [Fractions, Decimals, and Percents with Money](#) (Word) / [PDF](#)
 - [Fractions, Decimals, and Percents with Number Lines](#) (Word) / [PDF](#)
 - [Hundreds Grids](#) (Word) / [PDF](#)
 - [Working with Percents](#) (Word) / [PDF](#)
- VDOE Word Wall Cards: Grade 6 ([Word](#)) | ([PDF](#))
 - Ratio
 - Equivalent Relationships
 - Equivalent Relationships
- Desmos Activity
 - Battery – Percents, Decimals, and Fractions

Supporting and Prerequisite SOL: [6.1](#), [5.2a](#), [4.2b](#), [4.2c](#), [4.3a](#), [4.3d](#)

SOL 6.2a - Just in Time Quick Check

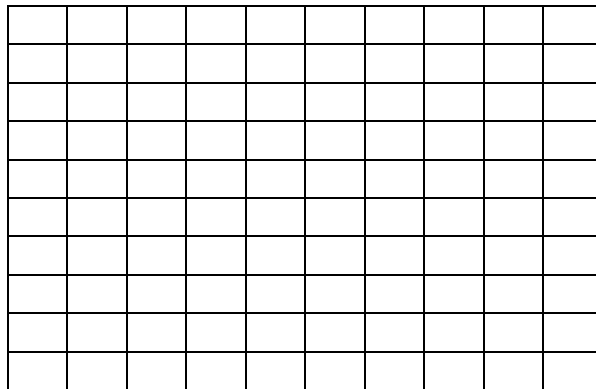
1. Represent $\frac{13}{20}$ on the grid.



- What decimal is equivalent to the fraction $\frac{13}{20}$?
- What percent is equivalent to the fraction $\frac{13}{20}$?

2. Dawit eats $\frac{3}{5}$ of a brownie.

- Write a decimal that represents the amount of brownie that Dawit eats.
- Write a percent that represents the amount of brownie that Dawit eats.
- Represent your thinking using the grid or a number line.



3. Write the equivalent fraction and decimal for the percent below. Explain how you solved using pictures, numbers and words.

$$149\% = \underline{\quad} = \underline{\quad}$$

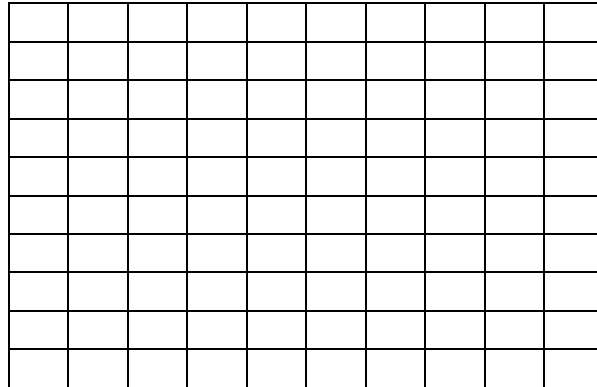
4. A teacher has 11 shirts. Four of the shirts are blue.

- What fraction represents the ratio of blue shirts to the total number of shirts?
- What decimal represents the ratio of blue shirts to the total number of shirts?
- What percent represents the ratio of blue shirts to the total number of shirts?

SOL 6.2a - Just in Time Quick Check Teacher Notes

Common Errors/Misconceptions and their Possible Indications

1. Represent $\frac{13}{20}$ on the grid.

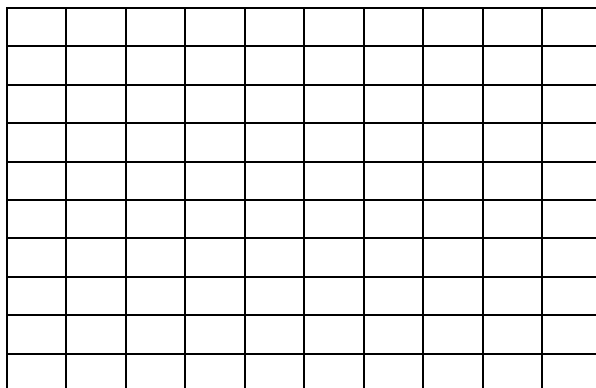


- What decimal is equivalent to the fraction $\frac{13}{20}$?
- What percent is equivalent to the fraction $\frac{13}{20}$?

Some students may shade in 13 of the squares in the grid. This indicates a lack of understanding of the relationship of the numerator to the denominator and how they relate to the whole (represented as 100 squares). These students may not understand that decimals and percents are other ways to represent fractions, or they may not realize that $\frac{13}{20}$ is equivalent to a number divided by 100. Some students also may not understand that a fraction is part of a whole and that the chart represents the whole. These students may need more experience with modeling fractions on a hundreds grid, using number lines, or relating fractions to money. Additionally, students can benefit from comparing the fraction to a benchmark such as $\frac{1}{2}$. If the fraction is less than one-half, less than half of the chart should be shaded in.

2. Dawit eats $\frac{3}{5}$ of a brownie.

- Write a decimal that represents the amount of brownie that Dawit eats.
- Write a percent that represents the amount of brownie that Dawit eats.
- Represent your thinking using the grid or a number line.



Some students may have trouble representing fifths on the hundreds grid. These students may not see the relationship between fifths and tenths or between fifths and hundredths. Teachers may wish to have students use fraction strips to model $\frac{3}{5}$ and then use tenths to find an equivalent fraction. After connecting $\frac{3}{5}$ to $\frac{6}{10}$, students may recognize that six columns can be shaded on the grid to represent six-tenths or students may need further exploration with concrete materials to understand $\frac{6}{10}$ is equivalent to $\frac{60}{100}$. After making these connections, students may need further experiences with models connecting the fraction representation to the decimal and percent representations.

Other potential teaching strategies could include using pennies when introducing decimals. Discuss breaking 100 pennies into 5 groups and how many pennies would be in each group. This could help the student relate the fraction to the whole. Use other manipulatives throughout the learning process for students to understand the relationship between fractions, decimals, and percentages.

3. Give the equivalent fraction and decimal for the percent below. Explain how you solved using pictures, numbers and words.

$$149\% = \underline{\quad} = \underline{\quad}$$

A common misconception for some students is thinking that percents do not go over 100. Students with this misconception may not understand the connection between the percent and the whole. They may not recognize that a percent can also be represented as a fractional part of 100 or that 100% represents a whole. These students may benefit from using concrete materials and pictorial representations such as base ten blocks, number lines, decimal squares, or shaded grids to model percents over 100. These materials provide a concrete way to see that 100% is a whole and then the remaining 49% is a portion of another whole. This provides a visual way for students to connect a percentage like 149% to an improper fraction or mixed number and a decimal over a whole.

4. A teacher has 11 shirts. Four of the shirts are blue.

- What fraction represents the ratio of blue shirts to the total number of shirts?
- What decimal represents the ratio of blue shirts to the total number of shirts?
- What percent represents the ratio of blue shirts to the total number of shirts?

Some students have difficulty understanding that a part to whole ratio is a fractional relationship. Students who do not think of this type of ratio as a fraction are likely to struggle with finding an equivalent decimal and percent. These students may benefit from using concrete materials to build sets and then use fractions to describe different portions of the set. After using fractions to describe the set, students can write a ratio to describe part to whole relationships in the set. This may help students to see the connection between ratios and fractions. After making that connection, students can find equivalent decimals and percents.