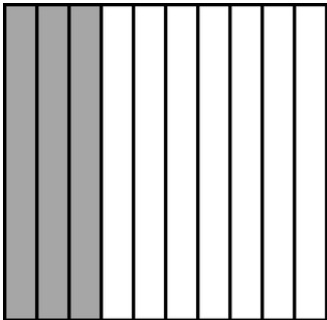
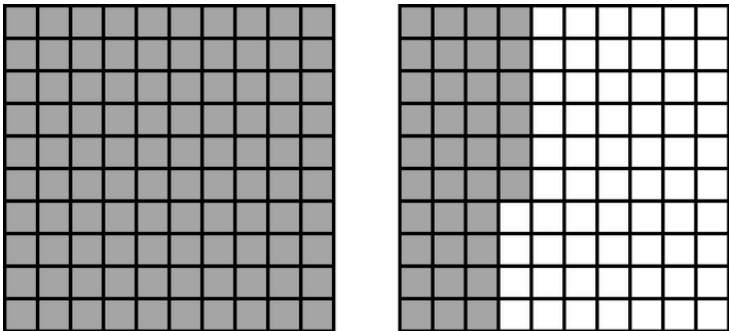




6.RP.1: Convert between any two representations (fractions, decimals, percents) of positive rational numbers without the use of a calculator. (E)	
Reporting Category: Ratios & Proportional Reasoning	Subdomain: Operations with Positive Numbers
<u>6.RP.1 Instructional Framework</u>	
Assessed On:	
☒ Checkpoint 1 ☐ Checkpoint 2 ☐ Checkpoint 3 ☒ Summative	
Content Limits: • Positive rational numbers • May include terminating or repeating decimals. • Models may include tenths and hundredths grids or area models.	
Clarifications: • Place a percent sign after the response box for any items that require students to enter a percentage.	
Calculator Availability: Not Allowed	
Expected Academic Vocabulary: value, equivalent, percent, decimal, fraction, convert	
Examples of Context at Varying Difficulty Levels	
Context: Easy	Limit conversions to a terminating decimal; fractions to denominators of 10 and 100, and percents to multiples of 10.
Context: Medium	Include 1-digit repeating decimal in conversions, fractions with denominators of 2, 4, or 5, and percents greater than 10% and less than 99%.
Context: Difficult	Conversions include multi-digit repeating decimals ($1/11 = 0.\overline{09}$) and/or decimals where the first digit after the decimal is not the repeating digit ($1/6 = 0.1\overline{6}$); fractions, percents, and decimals may be less than 10% or greater than 100%
Proficiency Level Descriptors and Example Items	
Looking Back: 5.NS.2 ILEARN Item Specification 5.NS.4 ILEARN Item Specification	Looking Ahead: 7.RP.2 ILEARN Item Specification
Below Proficiency: Identify equivalent fractions, decimals and percents using a given model.	



A model of 30% is given.  Which decimal is equivalent to 30%? a. 30.0 b. 0.03 c. 0.30 d. 3.00	This is a DOK 1 item because the student must identify an equivalent decimal based on a given percent and model. This is an easy item because the decimal is a multiple of 10.
A model of 1.36 is given below.  Which fraction is equivalent to 1.36? a. $1 \frac{36}{10}$ b. $1 \frac{36}{100}$ c. $\frac{136}{10}$ d. $\frac{136}{1}$	This is a DOK 1 item because the student must identify an equivalent fraction based on a given decimal and model. This is a difficult item because the percent is greater than 1.
Approaching Proficiency: Identify or write the equivalent conversion of a positive rational number in one way.	
Which fraction is equivalent to $0.\overline{1}$? a. $\frac{1}{8}$ b. $\frac{2}{8}$ c. $\frac{1}{9}$	This is a DOK 1 item because the student must identify the equivalent conversion of a decimal to a



d. $\frac{1}{11}$	fraction. This is a medium difficulty item because the given decimal is a one-digit repeating decimal.
Which fraction is equivalent to 40%? a. $\frac{8}{20}$ b. $\frac{2}{10}$ c. $\frac{40}{10}$ d. $\frac{4}{1}$	This is a DOK 1 item because the student must identify the equivalent conversion of a percent to a fraction. This is an easy item because the decimal is a multiple of 10.
What is 0.125 written as a percent? Answer: 12.5%	This is a DOK 1 item because the student must write the equivalent conversion of a decimal to a percent. This is a medium difficulty item because the percent is greater than 10% and less than 99%.
What is the equivalent decimal to $\frac{8}{11}$? Answer: $0.\overline{72}$	This is a DOK 1 item because the student must write the equivalent conversion of a fraction to a decimal. This is a difficult item because the conversion includes multiple repeating decimals.
At Proficiency: Identify or write the equivalent conversions of a positive rational number in more than one way.	



Select the two values that are equivalent to 60%. a. $\frac{1}{6}$ b. $\frac{3}{5}$ c. $\frac{6}{1}$ d. 0.6 e. 0.06	This is a DOK 2 item because the student must identify equivalent conversions of a positive rational number in more than one way. This is an easy item because the percent is a multiple of 10.
Select two values that are equivalent to $\frac{7}{8}$. a. 0.8 b. 0.875 c. 8.75% d. 87.5% e. 875%	This is a DOK 2 item because the student must identify equivalent conversions of a positive rational number in more than one way. This is a difficult item because the denominator of the given fraction is 8.
Above Proficiency: Apply knowledge of equivalent forms of positive rational numbers to justify conversions.	
Two students are asked to convert the fraction $\frac{5}{6}$ to a decimal. Student 1 says $\frac{5}{6}$ is equivalent to 5.6. Student 2 says $\frac{5}{6}$ is equivalent to $0.8\bar{3}$ Determine which student's conversion is correct and explain your answer. Answer: Students should determine that Student 2 is correct. They should include information about dividing the numerator by the denominator to determine the decimal and that the hundredths digit is repeating. Students may also explain their answer by showing this mathematical work.	This is a DOK 3 item because students must first determine which conversion is correct, then justify their answer in writing or through mathematical work. This is a difficult item because only the hundreds digit is repeating.