

#### Vertical Progression:

<b>2<sup>nd</sup> Grade</b>	<p><b>2.G.A Reason with shapes and their attributes.</b></p> <ul style="list-style-type: none"> <li>○ <b>2.G.A.3</b> Partition circles and rectangles into two, three, or equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.</li> </ul>
<b>3<sup>rd</sup> Grade</b>	<p><b>3.NF.A Develop understanding of fractions as numbers.</b></p> <ul style="list-style-type: none"> <li>○ <b>3.NF.A.3</b> Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size.</li> <li>○ <b>3.NF.A.3.a.</b> Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line.</li> <li>○ <b>3.NF.A.3.b</b> Recognize and generate simple equivalent fractions (e.g., <math>1/2=2/4</math>, <math>4/6=2/3</math>). Explain why the fractions are equivalent, e.g. by using visual fraction models.</li> <li>○ <b>3.NF.A.3.c</b> Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. <i>Examples: Express 3 in the form <math>3 = 3/1</math>; recognize that <math>6/1 = 6</math>; locate <math>4/4</math> and 1 at the same point of a number line diagram.</i></li> <li>○ <b>3.NF.A.3.d</b> Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols <math>&gt;</math>, <math>=</math>, or <math>&lt;</math>, and justify the conclusions, e.g., by using a visual fraction model.</li> </ul>
<b>4<sup>th</sup> Grade</b>	<p><b>4.NF.C Understand decimal notation for fractions, and compare decimal fractions.</b></p> <ul style="list-style-type: none"> <li>○ <b>4.NF.C.5</b> Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100.</li> <li>○ <b>4.NF.C.6</b> Use decimal notation for fractions with denominators 10 or 100.</li> <li>○ <b>4.NF.C.7</b> Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols <math>&gt;</math>, <math>+</math>, or <math>&lt;</math>, and justify the conclusions, e.g., by using a visual model.</li> </ul>
<b>5<sup>th</sup> Grade</b>	<p><b>5.NBT.A Understand the place value system.</b></p> <ul style="list-style-type: none"> <li>○ <b>5.NBT.A.1</b> Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and <math>1/10</math> of what it represents in the place to its left.</li> <li>○ <b>5.NBT.A.3</b> Read, write, and compare decimals to thousandths.</li> <li>○ <b>5.NBT.A.3.a</b> Read and write decimals to thousandths using base-ten numerals, number names, and expanded form.</li> <li>○ <b>5.NBT.A.3.b</b> Compare two decimals to thousandths based on meanings of the digits in each place, using <math>&gt;</math>, <math>=</math>, and <math>&lt;</math> symbols to record the results of comparisons.</li> </ul>

#### Students will demonstrate command of the ELG by:

- Changing a fraction with a denominator of 10 to an equivalent fraction with a denominator of 100.
- Adding two fractions with respective denominators of 10 and 100.
- Using decimal notation for fractions with denominators 10 and 100.
- Interpreting place value in decimals to hundredths.
- Explaining the relationship of decimals to the whole.
- Comparing two decimals to hundredths by reasoning about their size.
- Recording results when comparing two decimal using the symbols  $>$ ,  $=$ , or  $<$ .

#### Vocabulary:

- decimal point
- denominator
- digit
- equal to
- equivalent
- hundredths
- numerator
- unit fraction

#### Sample Instructional/Assessment Tasks:

##### 1) Standard: 4.NF.C.5

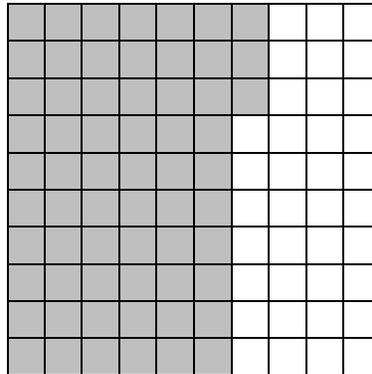
**Source:** <https://grade4commoncoremath.wikispaces.hcps.org/Assessing+4.NF.5>

**Item Prompt:**

A dime is  $\frac{1}{10}$  of a dollar and a penny is  $\frac{1}{100}$  of a dollar. What fraction of a dollar is 6 dimes and 3 pennies? Use a model to show your thinking. Write your answer in both fraction and decimal form.

**Correct Answer:**

$$\frac{63}{100} / 0.63$$



*\*Students' models may vary.*

#### 2) Standard: 4.NF.C.6

**Source:** <https://grade4commoncoremath.wikispaces.hcpss.org/Assessing+4.NF.6>

**Item Prompt:**

Amy thinks  $45 \text{ hundredths} + 2 \text{ tenths}$  is  $47 \text{ hundredths}$ . Do you agree or disagree with her. Explain and/or use a model to prove your answer.

**Correct Answer:**

Amy is incorrect because 2 tenths is equal to 20 hundredths;  $45 \text{ hundredths} + 20 \text{ hundredths} = 65 \text{ hundredths}$ .

#### 3) Standard: 4.NF.C.7

**Source:** <https://grade4commoncoremath.wikispaces.hcpss.org/Assessing+4.NF.7>

**Item Prompt:**

Alexis loves to work out on the treadmill. On Monday, she ran 3.25 miles. On Tuesday she ran 1.75 miles. On Wednesday she ran 2.65 miles. On Friday, she ran more than she did on Tuesday but less than she did on Monday. What could the possible amount of time be that she ran on Friday? What day did Alexis run the shortest distance? Explain your thinking.

**Correct Answer:**

Any number between 1.76 and 2.64 would be correct for the distance Alexis ran on Friday. She ran the shortest distance on Tuesday because 1.75 is less than 2.65, 3.25, and the distance the student identified to be on Friday.