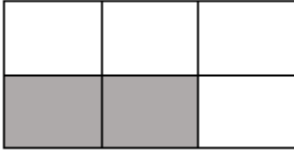Directions: Answer the following question(s).

1 | MGSE4.NF.1 (DOK 2)

Which fraction is equivalent to the one represented in the model?

A. $\frac{1}{3}$

B. $\frac{1}{6}$

C. $\frac{2}{3}$

D. $\frac{2}{4}$

Master ID: 3037738 Revision: 2
Correct: A
Rubric: 1 Point(s)
Standards:
    MGSE4.NF.1

2 | MGSE4.NF.1 (DOK 2)

What two fractions are equivalent to $\frac{8}{20}$?

A. $\frac{4}{5}$ and $\frac{8}{10}$

B. $\frac{8}{10}$ and $\frac{16}{20}$

C. $\frac{4}{10}$ and $\frac{32}{60}$

D. $\frac{4}{10}$ and $\frac{32}{80}$

Master ID: 3038234 Revision: 2
Correct: D
Rubric: 1 Point(s)
Standards:
    MGSE4.NF.1

Directions: Answer the following question(s).

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3   MGSE4.NF.1 (DOK 2)

Write 2 fractions that are equivalent to $\frac{3}{4}$. Show your thinking.

Master ID: 3037743 Revision: 7

Rubric: 2 Point(s)

MGSE4.NF.1: Explain why two or more fractions are equivalent $a/b = (n \times a)/(n \times b)$ ex: $1/4 = (3 \times 1)/ (3 \times 4)$ by using visual fraction models. Focus attention on how the number and size of the parts differ even though the fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.

2   **2 Point Response:**

The student correctly states 2 fractions that are equivalent to $\frac{3}{4}$ and provides evidence for why the fractions are equivalent to $\frac{3}{4}$.

Explanation/Evidence:

Fractions equivalent to $\frac{3}{4}$ include $\frac{6}{8}$ and $\frac{12}{16}$

$$\frac{3}{4} \times \frac{2}{2} = \frac{6}{8}$$

$$\frac{3}{4} \times \frac{4}{4} = \frac{12}{16}$$

Review the fractions the student wrote, to ensure they are equivalent to $\frac{3}{4}$. The student must show that an equivalent fraction is found by multiplying or dividing the numerator and denominator by the same number.

1   **1 Point Response:**

The student correctly states 2 fractions that are equivalent to $\frac{3}{4}$, but does not provide complete, clear, or correct evidence for why the fractions are equivalent.

0   **0 Point Response:**

The student responds incorrectly, and the evidence is incomplete, unclear, incorrect, or not included.

Standards:

    MGSE4.NF.1

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4   MGSE4.NF.1 (DOK 2)

Mrs. Walton's class is making cookies to celebrate their success on a recent quiz. The recipe calls for $\frac{12}{16}$ cup of melted butter. Shade in the measuring cup below to show the class how much butter they need.

Directions: Answer the following question(s).

Master ID: 3037740 Revision: 3
Rubric: 2 Point(s)

MGSE4.NF.1 Explain why two or more fractions are equivalent $a/b = (n \times a)/(n \times b)$ ex: 1/4 = (3 × 1)/ (3 × 4) by using visual fraction models. Focus attention on how the number and size of the parts differ even though the fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.

2   **2 Point Response:**

The student accurately identifies $\frac{3}{4}$ as an equivalent fraction to $\frac{12}{16}$, and then correctly shades $\frac{3}{4}$ within the measuring cup.

1   **1 Point Response:**

The student accurately identifies $\frac{3}{4}$ as an equivalent fraction to $\frac{12}{16}$, but does not correctly shade $\frac{3}{4}$ within the measuring cup.

0   **0 Point Response:**

The student does not accurately identify $\frac{3}{4}$ as an equivalent fraction to $\frac{12}{16}$, and does not correctly shade $\frac{3}{4}$ within the measuring cup.

Standards:
    MGSE4.NF.1

5   MGSE4.NF.1 (DOK 3)

a.) Maria used pattern blocks to show two fractions that are equivalent. Do you agree with her? Why or why not?

b.) If the trapezoid represents only one-half of a whole, draw what you think the whole looks like.

Directions: Answer the following question(s).

Master ID: 3037739 Revision: 5

Rubric: 2 Point(s)

MGSE4.NF.1: Explain why two or more fractions are equivalent $a/b = (n \times a)/(n \times b)$ ex: 1/4 = (3 × 1)/ (3 × 4) by using visual fraction models. Focus attention on how the number and size of the parts differ even though the fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.

2   **2 Point Response:**

The student responds accurately to parts A & B, including providing a correct explanation in part A as to whether the fractions are equivalent.

<u>Correct Responses</u>:

a.) The 2 fractions are equivalent. The trapezoid is $\frac{1}{2}$ of a whole (hexagon), and the triangles are $\frac{3}{6}$ (of a hexagon). $\frac{1}{2} \times \frac{3}{3} = \frac{3}{6}$

b.) The whole would be a hexagon. A hexagon includes 6 equilateral triangles, whereas the trapezoid is 3 equilateral triangles. Check the student's drawing.

1   **1 Point Response:**

The student responds accurately to part A <u>or</u> B, including providing a correct explanation in part A as to whether the fractions are equivalent.

0   **0 Point Response:**

The student responds incorrectly to parts A & B, and the explanation in part A is incomplete, unclear, incorrect, or not included.

Standards:
     MGSE4.NF.1

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6   MGSE4.NF.2 (DOK 2)

Dylan and Cindy are reading the same book for class. Dylan has read $\frac{5}{8}$ of the book. Cindy has read more of the book than Dylan. Which fraction of the book could Cindy have read?

A. $\frac{1}{4}$ of the book

B. $\frac{1}{2}$ of the book

C. $\frac{3}{5}$ of the book

D. $\frac{2}{3}$ of the book

Master ID: 3037741 Revision: 2

Correct: D

Rubric: 1 Point(s)

Standards:
     MGSE4.NF.2

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7   MGSE4.NF.2 (DOK 2)

Laura wants to hang her picture but does not want to make a deep hole in her bedroom wall. Which of these nails is the shortest?

A. $\frac{1}{2}$ in.

B. $\frac{3}{4}$ in.

C. $\frac{5}{6}$ in.

D. $\frac{11}{12}$ in.

Master ID: 3037742 Revision: 2

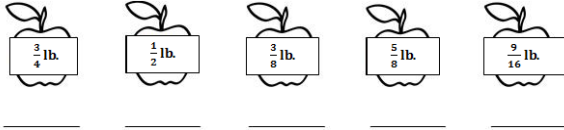Correct: A

Rubric: 1 Point(s)

Standards:
     MGSE4.NF.2

Directions: Answer the following question(s).

8   MGSE4.NF.2 (DOK 2)

Raymond measured the weight of some apples in pounds. He wants to put the apples in order from lightest to heaviest. Show him the correct order by ranking the apples from 1 (lightest) to 5 (heaviest). Show your thinking.

| Master ID:	3038238 Revision:	4

Rubric: 2 Point(s)

MGSE4.NF.2: Compare two fractions with different numerators and different denominators, e.g., by using visual fraction models, by creating common denominators or numerators, or by comparing to a benchmark fraction such as 1/2 . Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols >, =, or <, and justify the conclusions.

2   **2 Point Response:**

The student correctly orders the apples from lightest to heaviest, and provides evidence of work to show why the order is correct.

Correct Response:
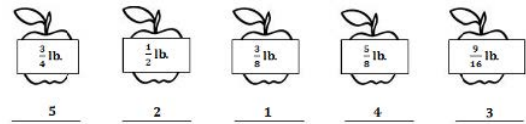
Evidence of Work:

Review the student's work for how the apples are ordered. Students may choose to identify a common denominator and then compare the numerators.

$$\frac{3}{4} = \frac{12}{16}$$

$$\frac{1}{2} = \frac{8}{16}$$

$$\frac{3}{8} = \frac{6}{16}$$

$$\frac{5}{8} = \frac{10}{16}$$

$$\frac{9}{16} = \frac{9}{16}$$

$$\frac{6}{16} < \frac{8}{16} < \frac{9}{16} < \frac{10}{16} < \frac{12}{16}$$

1   **1 Point Response:**

The student correctly orders the apples from lightest to heaviest, but provides an incomplete, unclear, or incorrect evidence of work to show why the order is correct.

0   **0 Point Response:**

The student incorrectly orders the apples from lightest to heaviest, and the evidence of work is incomplete, unclear, or incorrect to show why the order is correct.

Standards:
    MGSE4.NF.2

Directions: Answer the following question(s).

| 9 | MGSE4.NF.2 (DOK 3) |

Todd and Anna disagree about where $\frac{5}{8}$ belongs on a number line. Todd believes it is close to $\frac{1}{2}$. Anna believes it is closer to 1. Show where you would put $\frac{5}{8}$ on a number line and explain your thinking.

Master ID: 3037748 Revision: 4
Rubric: 2 Point(s)

MGSE4.NF.2: Compare two fractions with different numerators and different denominators, e.g., by using visual fraction models, by creating common denominators or numerators, or by comparing to a benchmark fraction such as 1/2 . Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols >, =, or <, and justify the conclusions.
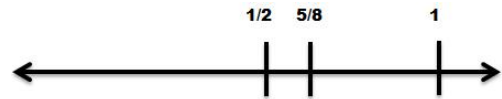
2 **2 Point Response:**

The student responds correctly by stating that Todd is correct, that $\frac{5}{8}$ is closer to $\frac{1}{2}$. The student also accurately shows $\frac{5}{8}$ on a number line, and justifies the location of $\frac{5}{8}$ on the number line.

Evidence and Explanation:

$\frac{5}{8}$ is $\frac{1}{8}$ away from $\frac{1}{2}$, since $\frac{4}{8} = \frac{1}{2}$.

$\frac{5}{8}$ is $\frac{3}{3}$ away from 1 whole, since $\frac{8}{8}$ = 1 whole.

1 **1 Point Response:**

The student responds correctly by stating that Todd is correct, that $\frac{5}{8}$ is closer to $\frac{1}{2}$. The student does not, however, accurately show $\frac{5}{8}$ on a number line, and or justify the location of $\frac{5}{8}$ on the number line.

0 **0 Point Response:**

The student responds incorrectly by stating that Anna is correct, does not accurately show $\frac{5}{8}$ on a number line, and does not accurately justify the location of $\frac{5}{8}$ on the number line.

Standards:
    MGSE4.NF.2

Directions: Answer the following question(s).

10 MGSE4.NF.2 (DOK 3)

Three-fourths of Mrs. Long's 24 students signed up for the Read-a-thon. Two-thirds of Mrs. Murray's 24 students signed up.

a.) How many students from each class signed up? Show your work.

b.) Which class will have more participation? Explain your thinking.

Master ID:	3038146 Revision: 6
Rubric:	4 Point(s)

MGSE4.NF.2: Compare two fractions with different numerators and different denominators, e.g., by using visual fraction models, by creating common denominators or numerators, or by comparing to a benchmark fraction such as 1/2 . Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols >, =, or <, and justify the conclusions.

4 **4 Point Response:**

The student responds correctly and completely to parts A & B, and provides a correct and complete explanation/evidence of work for why Mrs. Long's class will have more students than Mrs. Murray participating in the Read-a-thon.

Explanation/Evidence of Work:

Identify a common denominator, and then an equivalent fraction for $\frac{3}{4}$ and $\frac{2}{3}$.

Comparing the numerators, Mrs. Long's class has 2 additional students who signed up for the Read-a-thon.

$\frac{3}{4} = \frac{18}{24}$; 18 out of 24 students in Mrs. Long's class signed up for the Read-a-thon.

$\frac{2}{3} = \frac{16}{24}$; 16 out of 24 students in Mrs. Murray's class signed up for the Read-a-thon.

3 **3 Point Response:**

The student responds correctly to parts A & B, but provides an incomplete, unclear, or incorrect explanation/evidence of work for why Mrs. Long's class will have more students than Mrs. Murray participating in the Read-a-thon.

2 **2 Point Response:**

The student responds correctly to part A <u>or</u> B, and provides an incomplete, unclear, or incorrect explanation/evidence of work for why Mrs. Long's class will have more students than Mrs. Murray participating in the Read-a-thon.

1 **1 Point Response:**

The student responds correctly to part A without providing evidence for the correct answer, and provides an incomplete, unclear, or incorrect explanation/ evidence of work for why Mrs. Long's class will have more students than Mrs. Murray participating in the Read-a-thon.

Directions: Answer the following question(s).

0 **0 Point Response:**

The student responds incorrectly to parts A & B, and the explanation in part B for why Mrs. Long's class will have more students than Mrs. Murray participating in the Read-a-thon is incomplete, unclear, incorrect, or not included.

Standards:
MGSE4.NF.2

11 MGSE4.MD.2 (DOK 2)

Freddie checked out the IPAD from 8:05 AM to 10:25 AM.

Sonja checked out the IPAD from 10:15 AM to 12:27 PM.

Who had the IPAD checked out for the longest? How much longer?

A. Freddie had the IPAD 2 hours and 20 minutes longer.

B. Freddie had the IPAD 8 minutes longer.

C. Sonja had the IPAD 2 hours and 12 minutes longer.

D. Sonja had the IPAD 8 minutes longer.

Master ID: 3040194 Revision: 3
Correct: B
Rubric: 1 Point(s)
Standards:
MGSE4.MD.2