

Directions: Answer the following question(s).

1 MGSE4.NF.3.b (DOK 2)

A pizza is divided into 8 equal slices. Of the slices, 1 has sausage, 3 have bacon, 1 has peppers, 2 have mushrooms, and 1 has pepperoni. Which 2 sections together take up more than half the pizza?

- A. sausage and bacon
- B. bacon and peppers
- C. peppers and mushrooms
- D. mushrooms and bacon

2 MGSE4.NF.3.b (DOK 2)

Sally's teacher asked her to complete a math problem involving fractions. Sally's answer to the selected question was $\frac{8}{7}$. Which addition fraction problem was Sally solving?

A. $\frac{3}{3} + \frac{3}{3} + \frac{2}{1}$

Sally added the numerators together, and then added the denominators.

B. $\frac{2}{4} + \frac{4}{3}$

Sally multiplied the numerators together, and then added the denominators.

C. $\frac{1}{7} + \frac{7}{7}$

Sally added the numerators together, and kept the denominator of 7.

D. $\frac{7}{7} + \frac{7}{1}$

Sally kept the numerator of 7, and added the denominators together.

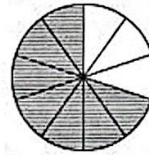
3 MGSE4.NF.3.b (DOK 3)

Ms. Trolley's students created models to represent the following equation:

$$\frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} = \frac{4}{5}$$

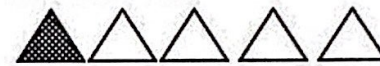
Which model correctly shows the addition problem above, and why?

A.



because $\frac{4}{5}$ of the circle is shaded.

B.



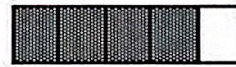
because there are 5 triangles and the numerator is 1.

C.



because there are 4 pieces shaded and each shaded part is $\frac{1}{5}$.

D.



because 4 out of 5 pieces are shaded in the figure.

Directions: Answer the following question(s).

4 MGSE4.NF.3.c (DOK 2)

Find the sum.

$$5\frac{4}{6} + 3\frac{1}{6} =$$

- A. 8
- B. $8\frac{3}{6}$
- C. $8\frac{5}{6}$
- D. $8\frac{5}{12}$

5 MGSE4.NF.3.c (DOK 2)

Everyday, Rosa drinks $\frac{6}{8}$ cup of orange juice at breakfast. How much orange juice does she drink in 4 days?

- A. $\frac{6}{32}$ cup
- B. $2\frac{5}{8}$ cups
- C. $2\frac{6}{8}$ cups
- D. 3 cups

6 MGSE4.NF.3.d (DOK 2)

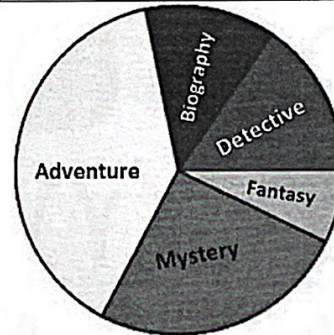
Andy is baking a cake for his niece's birthday. He finds he has $3\frac{3}{5}$ cups of sugar in the pantry. The cake requires $1\frac{4}{5}$ cups of sugar, and the icing requires $2\frac{1}{5}$ cups of sugar. Does Andy have enough sugar in his pantry to make and ice the cake?

- A. Yes, Andy has just enough cups of sugar to bake and ice the cake.
- B. Yes, Andy has enough sugar, with $\frac{2}{5}$ cups leftover.
- C. No, Andy will need to buy $\frac{1}{5}$ more cups of sugar to bake and ice the cake.
- D. No, Andy will need to buy $\frac{2}{5}$ more cups of sugar to bake and ice the cake.

7 MGSE4.NF.3.a (DOK 2)

Use the pie chart to answer the question below.

Favorite Types of Books



Customers at a bookstore were asked to vote for their favorite book genre. Which two types of books combined make approximately half of the votes?

Directions: Answer the following question(s).

8 MGSE4.NF.3.b (DOK 2)

Which student correctly explained and solved the problem to equal $\frac{6}{5}$?

- A. Student 1: $\frac{5}{5} + \frac{1}{5}$ You add $5 + 1 = 6$ for the numerator. The denominator of 5 will stay the same.
- B. Student 2: $\frac{3}{3} + \frac{3}{2}$ Add the numerators $3 + 3 = 6$. Add the denominators $3 + 2 = 5$.
- C. Student 3: $\frac{3}{3} + \frac{3}{2}$ Multiply the numerators and then add the denominators together to get the answer.
- D. Student 4: $\frac{5}{5} + \frac{5}{1}$ The numerator of 5 will stay the same. Add the denominators $5 + 1$ to equal 6.

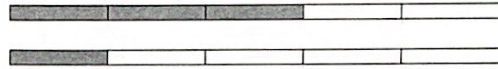
9 MGSE4.NF.3.d (DOK 2)

Danny walked his dog $1\frac{4}{10}$ miles on Monday, $2\frac{1}{10}$ miles on Tuesday, and $\frac{3}{10}$ miles on Wednesday. He also walked his dog on Thursday. Between Monday and Thursday, Danny walked his dog $5\frac{9}{10}$ miles. How many miles did Danny walk his dog on Thursday?

- A. $2\frac{1}{10}$ miles
- B. $2\frac{4}{10}$ miles
- C. $3\frac{5}{10}$ miles
- D. $3\frac{8}{10}$ miles

10 MGSE4.NF.3.b (DOK 3)

Jose drew a model to show that $\frac{4}{5} = \frac{3}{5} + \frac{1}{5}$.



Is he correct? Why or why not?

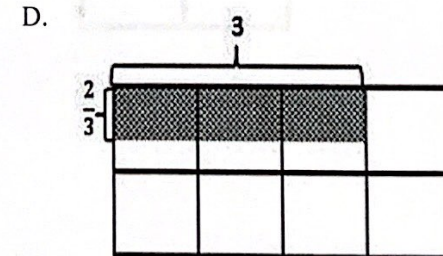
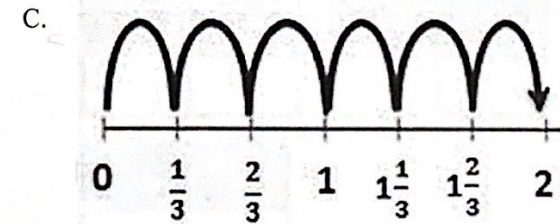
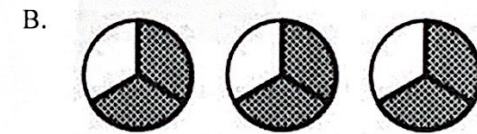
- A. Yes, because Jose's model shows addition of equivalent rectangles.
- B. Yes, because Jose's addition is a rectangle.
- C. No, because $5 + 5$ should equal 10 in the denominator.
- D. No, because not enough rectangles are shaded.

11 MGSE4.NF.4.a (DOK 2)

Which of the following algorithms or illustrations does NOT correctly

represent $3 \times \frac{2}{3}$?

A. $\frac{2}{3} \times \frac{2}{3} \times \frac{2}{3}$



Directions: Answer the following question(s).

12 MGSE 4.NF.4.a (DOK 2)

The teacher's lounge has five tables with four chairs at each table. Currently, there are 3 teachers sitting at each table. Which multiplication expression represents the problem above?

- A. $3 \times \frac{4}{5}$
- B. $3 \times \frac{5}{4}$
- C. $4 \times \frac{3}{5}$
- D. $5 \times \frac{3}{4}$

13 MGSE4.NF.4.c (DOK 2)

The Russell High School basketball team scored a total of 108 points in their final game. Joshua scored exactly one-third of the total points the team scored. How many points were scored by the rest of the team?

- A. 36 points
- B. 49 points
- C. 72 points
- D. 85 points

14 MGSE4.NF.4.c (DOK 2)

Emma has a bouquet of 12 carnations. $\frac{1}{6}$ are red carnations and the rest are white. How many carnations are white?

- A. 2 white carnations
- B. 5 white carnations
- C. 10 white carnations
- D. 12 white carnations

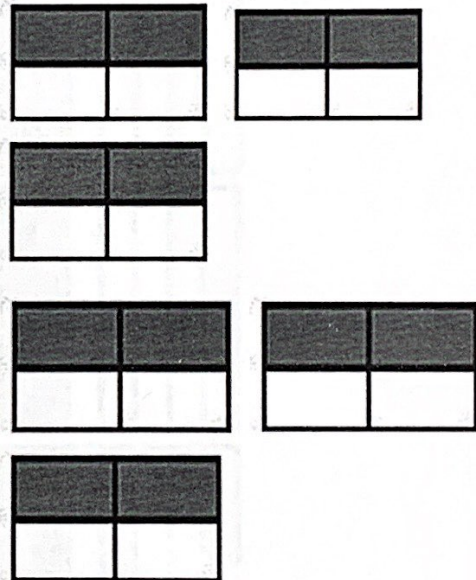
15 MGSE4.NF.4.c (DOK 2)

If a bucket holds $\frac{3}{4}$ gallons of water and 34 buckets of water fill the tank, how much water does the tank hold?

- A. $9\frac{1}{4}$ gallons
- B. 16 gallons
- C. $25\frac{1}{2}$ gallons
- D. $34\frac{3}{4}$ gallons

16 MGSE4.NF.4.b (DOK 2)

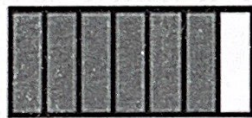
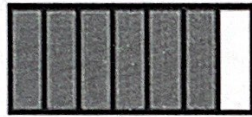
Write a multiplication expression to represent the model below and solve.



Directions: Answer the following question(s).

17 MGSE4.NF.4.b (DOK 2)

Arielle drew the following model to figure out how many miles she ran at PE last week.



Which equation correctly represents the model above?

- A. $5 \times \frac{6}{7} = 5\frac{6}{7}$
 B. $5 \times \frac{6}{7} = 4\frac{2}{7}$
 C. $18 \times \frac{1}{7} = 2\frac{4}{7}$
 D. $18 \times \frac{6}{7} = 15\frac{3}{7}$

18 MGSE4.NF.4.c (DOK 3)

Susan bought 15 apples and ate $\frac{1}{3}$ of them. Abby bought 8 apples and ate $\frac{1}{4}$ of them.

Susan and Abby ate the same number of apples. Is this true?

Explain your reasoning by providing an equation.

19 MGSE4.NF.4.c (DOK 3)

Write a multiplication word problem whose answer can be represented by the model below. Explain the steps you would take to solve the problem.

