Grade: 3

Enduring Skill 1: Students will develop an understanding of the meaning of fractions using the 8 mathematical practices.

Demonstrators:

1. Understand a fraction as a part of a whole.
2. Understand and represent fractions on a number line.
3. Explain and compare fractions.
4. Partition shapes into parts with equal areas and express the area of each part as a unit fraction of a whole.

Related Standards:

1. 3.NF.1
2. 3.NF.2
3. 3.NF.3
4. 3.G.2

Assessment Items:

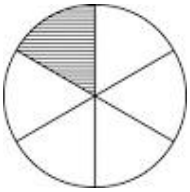
1. ES 1, Demonstrator 1, Standard 3.NF.1

A pan of cornbread is divided into eight unequal (pieces that are not equal) parts. Alana serves 2 of the parts.

A. Is it correct to say she has served 2/8 of the cornbread?
B. Explain your answer using words or illustrations.

2. ES 1, Demonstrator 1, Standard 3.NF.1

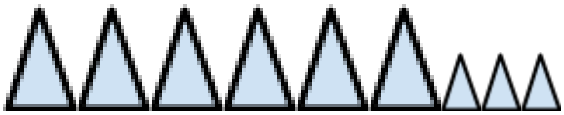
Carrie bought a pizza. The shaded part shows what part of the pizza she ate. What fraction of the whole pizza did she eat?



a. 1/6
b. 4/5
c. 5/6
d. 3/9

3. ES 1, Demonstrator 1, Standard 3.NF.2

Which shows 3/7 of the triangles to be large?

a. 

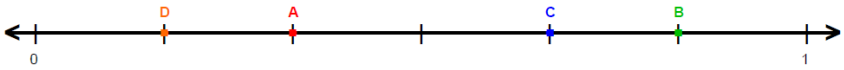
b. 

c. 

d. 

4. ES 1, Demonstrator 2, Standard 3.NF.2

Jane likes to ride her bike to school. She rides 4/6 of a mile to get to school. Which point shows 4/6 on the number line.



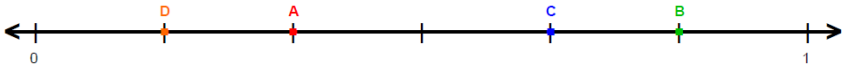
a. D
b. A
c. C
d. B

5. ES 1, Demonstrator, 2, Standard 3.NF.2

Zack lives ¼ mile from school. Label ¼ on the number line.

6. ES 1, Demonstrator 2, Standard 3.NF.2

What fraction does point A represent on the number line?

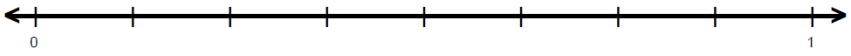


a. 2/6
b. 3/6
c. 6/2
d. 1/2

7. ES 1, Demonstrator 3, Standard 3.NF.3

Use the number line to help you compare ⅝ and ⅞. Fill in the blank with one of these symbols: <,>,=

5/8_____7/8



8. ES 1, Demonstrator 3, Standard 3.NF.3

The fruit bowl has 6 apples. ½ of the apples are green. How many apples are green?

½=___/6

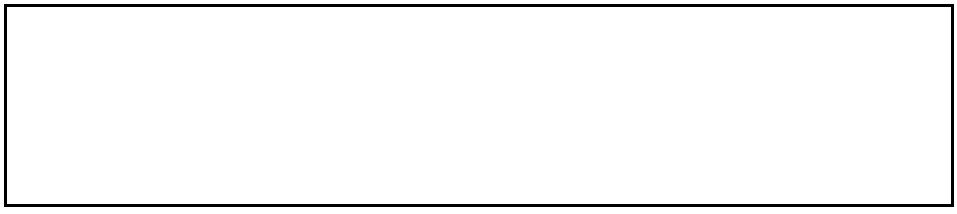
9. ES 1, Demonstrator 3, Standard 3.NF.3

Which of the following fractions is equal to 6?

a. 1/6
b. 3/3
c. 6/1
d. 8/2

10. ES 1, Demonstrator 4, Standard 3.G.2

Partition the rectangle into 4 equal parts. Label each part as a unit fraction of the whole.



11. ES1, Demonstrator 4, Standard 3.G.2

Shelby made a design with tiles. The design is divided into equal parts. What unit fraction represents each part of the whole?

red	Blue	red
yellow	Red	blue

a. 1/3
b. 1/4
c. 1/6
d. 1/8

What fraction names the part of Shelby's design that used red tiles?

a. 3/3
b. 3/4
c. 3/6
d. 3/8

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Enduring Skill 2: Students will develop an understanding of multiplication and division strategies using the 8 mathematical practices.

Demonstrators:

1. Interpret products of whole numbers and quotients of whole numbers.
2. Use multiplication and division within 100 to solve word problems.
3. Determine the unknown whole number in a multiplication or division equation relating three whole numbers.
4. Apply properties of operation as strategies to multiply and divide.
5. Fluently multiply and divide within 100.

Related Standards:

1. 3.OA.1
2. 3.OA.2
3. 3.OA.3
4. 3.OA.4
5. 3.OA.5
6. 3.OA.6
7. 3.OA.7
8. 3.OA.8
9. 3.OA.9
10. 3.NBT.3

Assessment Items:

1. **ES 2, Demonstrator 1, Standards 3.OA.1, 3.0A.2, 3.OA.8**

   Suppose there are 4 tanks and 3 fish in each tank. The total number of fish can be expressed by:

   a. 4x3=12
   b. 4+3=7
   c. 4-3=1
   d. 4+3=12

2. **ES 2, Demonstrator 1, Standards 3.OA.1, 3.0A.2, 3.OA.8**

   Which division equation would show 12 fish divided equally among 4 tanks?

   a. 4x3=12
   b. 12÷4=3
   c. 12÷3=4
   d. 12x3=36

3. **ES 2, Demonstrator 1, Standards 3.OA.1, 3.0A.2, 3.OA.8**

   Joe has 24 crayons. How many crayons does he put in each box if he has 6 boxes?

4. **ES 2, Demonstrator 1, Standards 3.OA.1, 3.0A.2, 3.OA.8**

   There are 6 bags of candy. Each bag holds 8 pieces of candy. How many pieces of candy are there in all?

5. **ES 2, Demonstrator 2, Standard 3.OA.3**

   Maria cuts 12 feet of ribbon into 3 equal pieces. How long is each piece of ribbon? Draw an illustration **and** write an equation to show the length of each piece of ribbon.

6. ES 2, Demonstrator 2, Standard 3.OA.3

The bag has 48 hair clips, Laura and her three friends want to share them equally. How many hair clips will each person receive?

7. ES 2, Demonstrator 2, Standard 3.OA.3

Kathy needs to buy 480 plates for a party. Which sets of plates could Kathy buy if she wants to make sure she has enough?

a. 8 packages with 70 plates each
b. 9 packages with 50 plates each
c. 6 packages with 80 plates each
d. 4 packages with 90 plates each

8. ES 2, Demonstrator 2, Standard 3.OA.3

S**tudents at the Dogwood Elementary School do a sponsored walk.**
Jack is sponsored for $6 for each lap.
Jill is sponsored for $4 for each lap.
Jack and Jill each do 5 laps.
How much money to Jack and Jill raise in all?
Show your work.

9. ES 2, Demonstrator 2, Standard 3.OA.3

Robin has three bags. There are 5 marbles in each bag. Write a multiplication equation that can determine the total number of Robin's marbles

10. ES 2, Demonstrator 2, Standard 3.OA.3

Mary raises $30 for walking 6 laps. How much money was she given for each lap?

11. ES 2, Demonstrator 2, Standard 3.OA.3

David has 24 plants in the garden. He has them in 8 equal rows. How many plants are in each row?

a. 24
b. 3
c. 9
d. 3

12. ES 2, Demonstrator 3, Standards 3.OA.6, 3.OA.4

Determine the unknown number that makes the equation true.
8xn=48.

a. 6
b. 40
c. 5
d. 10

13. ES 2, Demonstrator 3, Standards 3.OA.6, 3.OA.4.

If 6 x 8 is 48, what is 48 divided by 6?

_____

14. ES 2, Demonstrator 3, Standards 3.OA.6, 3.OA.4.

Which of the following multiplication expressions equal 240?

a. 3 X 80
b. 8 X 30
c. 60 X 3
d. 40 X 6

15. ES 2, Demonstrator 3, Standards 3.OA.6, 3.OA.4

32 ÷ n = 4

n=_____

16. ES 2, Demonstrator 3, Standards 3.OA.6, 3.OA.4

n x 9=81

n=_____

17. ES 2, Demonstrator 4, Standards 3.OA.5, 3.OA.9, 3.NBT.3

Which number makes the number sentence true?
5 x 6 = 30 and 6 x n = 30

a. 24
b. 5
c. 30

d. 7

18. **ES 2, Demonstrator 4, Standards 3.OA.5, 3.OA.9, 3.NBT.3**

Carl is solving (8 X 5) X 2. He decides to multiply 8 X (5 X 2).

A. What is the product?
B. Is he correct? Explain your reasoning

19. ES 2, Demonstrator 4, Standards 3.OA.5, 3.OA.9, 3.NBT.3

Shirley is trying to solve 9 X 85. Which of the following could she solve to get the correct answer?

a. (9 X 80) + (9 X 5)
b. (9 X 8) + (9 X 5)
c. (9 X 8) + (9 X 50)
d. (9 X 80) X (9 X 5)

20. ES 2, Demonstrator 4, Standards 3.OA.5, 3.OA.9, 3.NBT.3

4 X (2 X 9)= (4 X n) X 9

n=_____

21. ES 2, Demonstrator 5, Standard 3.OA.7

A. How many groups of 4 are in 12?
B. What number times 4 is 12?

22. **ES 2, Demonstrator 5, Standard 3.OA.7**

There are 42 oranges in 7 bags. Each bag has the same number of oranges. Write and solve an equation to determine how many oranges are in each bag.

23. **ES 2, Demonstrator 5, Standard 3.OA.7**

8 X 3=_____

24. ES 2, Demonstrator 5, Standard 3.OA.7

24 ÷ 6=____

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Enduring Skill 3: Students will describe, analyze, and compare properties of 2-dimensional shapes using the 8 mathematical practices.

Demonstrators:

1. Understand that shapes in different categories may share attributes and define larger categories.
2. Partition shapes into parts with equal areas.

Related Standards:

1. 3.G.1
2. 3.G.2

Assessment Items:

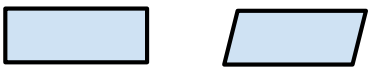
1. ES 3, Demonstrator 1, Standard 3.G.1

Shelby cut a shape out of a piece of construction paper. The shape had 4 equal sides. Which shape could Shelby have made?

A. square
B. hexagon
C. triangle
D. circle

2. ES 3, Demonstrator 1, Standard 3.G.1

Which word describes both shapes?



a. square
b. rhombus
c. rectangle
d. quadrilateral

3. **ES 3, Demonstrator 1, Standard 3.G.1**

Identify 3 different types of quadrilaterals that have two pairs of parallel sides.

4. ES 3, Demonstrator 1, Standard 3.G.1

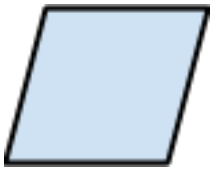
A. Explain how a rectangle and a parallelogram are alike?
B. How are they different?

5. ES 3, Demonstrator 1, Standard 3.G.1

A. Draw a picture of a quadrilateral. Draw a picture of a rhombus.
B. How are they alike?
C. How are they different?

6. ES 3, Demonstrator 1, Standard 3.G.1

Explain why this shape cannot be called a square.



7. ES 3, Demonstrator 1, Standard 3.G.1

Which statement best describes all of these polygons?

a. They have 4 sides
b. They have exactly 1 acute angle
c. They have a right angle
d. They have 2 obtuse angles

8. ES 3, Demonstrator 2, Standard 3.G.2

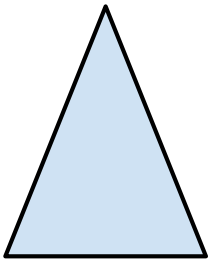
Divide the square into 4 equal parts.

9. ES 3, Demonstrator 2, Standard 3.G.2

Divide the rectangle into 6 equal parts.

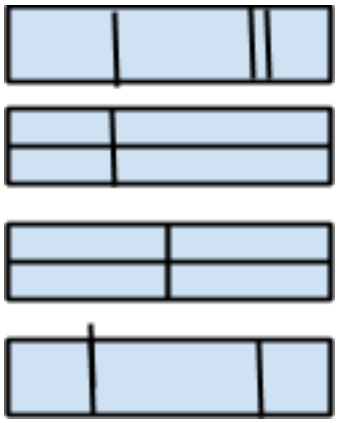
10. ES 3, Demonstrator 2, Standard 3.G.2

Divide the triangle into 3 equal parts



11. ES 3, Demonstrator 2, Standard 3.G.2

Which figure is partitioned into four equal parts?



Grade: 3

Enduring Skill 4: Students will develop an understanding of the structure of rectangular arrays using the 8 mathematical practices.

Demonstrators:

1. Recognize and understand concepts of area measurement.

2. Relate area to the operations of multiplication and addition.

3. Solve real world and mathematical problems involving perimeter and area.

Related Standards:

1. 3.MD.5
2. 3.MD.6
3. 3.MD.7
4. 3.MD.8

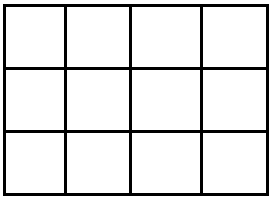
Assessment Items:

1. **ES 4, Demonstrator 1, Standards 3.MD.5, 3.MD.6**

   Bob is making a poster with an area of 30 square inches. Jenis making a poster with an area of 30 square centimeters. Bob thinks both the posters will be the same size. Is he correct? Explain your thinking.

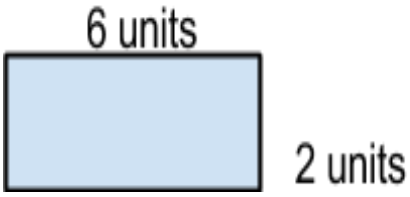
2. ES 4, Demonstrator 1, Standards 3.MD.5 3.MD.6

Count the square units to find the area
_____square units



3. ES 4, Demonstrator 1, Standards 3.MD.5, 3.MD.6

Jake wants to tile the kitchen floor. How many square tiles will he need?



4. ES 4, Demonstrator 2, Standard 3.MD.7

A playground is 20 feet long and 9 feet wide. What equation could determine the area of the playground?

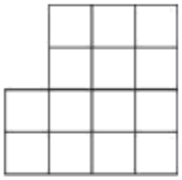
a. 20ft x 9ft=180 square feet
b. 20ft -9ft=11 square feet
c. 20ft+9ft=29 square feet
d. 20ft x 9ft=180 square feet
e. 20ft -9ft=11 square feet
f. 20ft+9ft=29 square feet

5. ES 4, Demonstrator 2, Standard 3.MD.7

John's bedroom measures 8 feet by 7 feet. What is the area of John's bedroom?

_____square feet

6. ES 4, Demonstrator 2, Standard 3.MD.7



Divide the shape above into two rectangles.
Write a multiplication sentence for each rectangle. What is the total area?

7. ES 4, Demonstrator 3, Standard 3.MD.8

A picnic table is 9 feet long and 3 feet wide. What is the area of the rectangular surface of the table?

a. 12 square feet
b. 18 square feet
c. 27 square feet
d. 39 square feet

8. ES 4, Demonstrator 3, Standard 3.MD.8

Use grid paper to draw a square with a perimeter of 24 units. Then draw a rectangle with a perimeter of 24 units.

9. ES 4, Demonstrator 3, Standard 3.MD.8

The floor is 6 meters in length and 4 meters in width. What is the area of the bedroom floor?

_____square meters