Rational Number Project

Level 1 / Lesson 9 / Overview

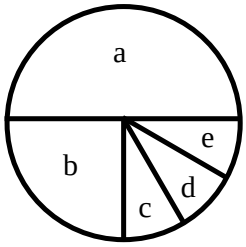
Students continue to explore equivalence with pictures and fraction circles.

Materials

- Transparencies 1 & 2
- Student Pages A, B, C
- Fraction Circles for students

Teaching Actions

1. Show transparency 1 to the class.



2. Ask students to name section a; section b; section c. [Also ask what color fraction circle piece matches each part]. Have them explain their reasoning.

3. Ask students if fractional parts can have more than one name. Ask students to name **section a** in two different ways. Record on transparency what they say with words and/or symobls:

   Ex: 1 yellow = 1/2; [1 blue = 1/4]
   1 yellow = 2 blues: 1/2 = 2/4

Comments

1. Seeing equivalence from pictures is not the same as seeing it with manipulatives. Some children are better at adding and taking out lines drawn in a diagram. Don't be surprised to see differences in how children respond to these pictures.

Teaching Actions

3. Point to the section (c + d + e). Ask: How are b and (c + d + e) alike? *[cover same amount]*

4. As a group write sentences using colors and symbols that descrbe equivalences in the picture.

   Ex: 1 blue = 3 reds; 1/4 = 3/12
   1 blue and 3 reds = 1 yellow; 1/4 + 3/12 = 1/2
   6 reds = 1 yellow; 6/12 = 1/2

5. Show transparency 2 to the class and talk through the naming of each part: a, b, c, (b + c), d, (d + e), (d + e + f + g) in several ways. Record symbolic sentences.
   Ex: a = 1/6; b = 2/6; (b+c) = 1/2; c = (d+e); 2/6 = 4/12

6. Repeat for the second rectangle at the bottom of the page.

7. Assign in pairs Student Pages A, B, C. For problems 1, 2 and 3, children refer to their fraction circles; for the last 3 problems, children rely on diagrams. They may need to draw on the pictures. Encourage them to do so.

Comments

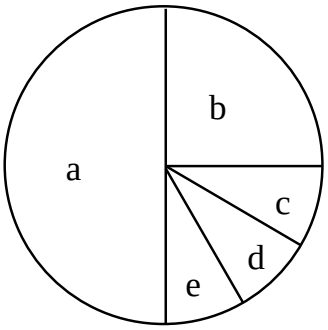
2. Note: Problem 1 is already completed; this was the same as the problem on Transparency 1.

Name _____

Lesson 9
Student Page A

Directions:
For each of the drawings write the color corresponding to the part marked a, b, c, and so on. Then write a sentence which is true about all of the color-coded parts altogether. Use your color-coded circular parts to help you, if you need them.

1.

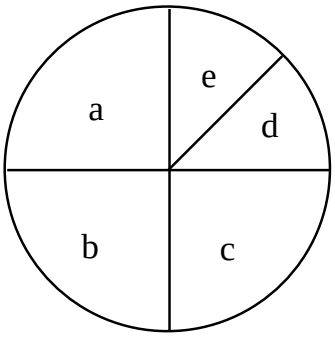


	Color	Fractional Part of Whole Circle
a.	yellow	1/2
b.	blue	1/4
c.	red	1/12
d.	red	1/12
e.	red	1/12

Sentences I can write about the parts:

a) 1 yellow and 1 blue and 3 reds equal 1 whole circle.
1/2 and 1/4 and 3/12 = 1 whole.
b) 1 blue and 3 reds equal 1 yellow. 1/4 and 3/12 = 1/2.
c) 3 reds equal 1 blue. 3/12 = 1/4.
d) 6 reds equal 1 yellow. 6/12 = 1/2.

2.



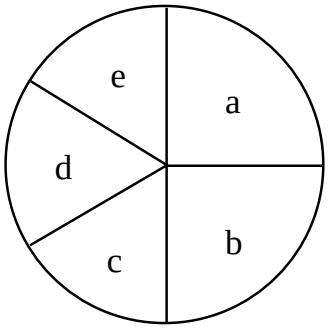
	Color	Fractional Part of Whole Circle
a.		
b.		
c.		
d.		
e.		

Sentences I can write about the parts:

Name _____

Lesson 9
Student Page B

3.



Color	Fractional Part of Whole Circle
a.	
b.	
c.	
d.	
e.	

Sentences I can write about the parts:

4.

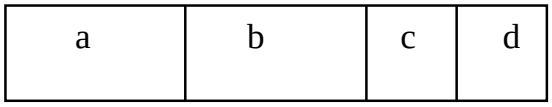
a	b	c	d

Fractional Part of Rectangle

a._____
b._____
c._____
d._____

Sentences I can write about the parts:

5.

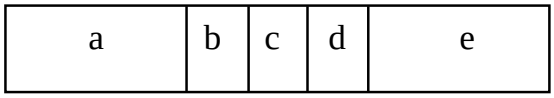


Fractional Part of Rectangle

a._____
b._____
c._____
d._____

Sentences I can write about the parts:

6.

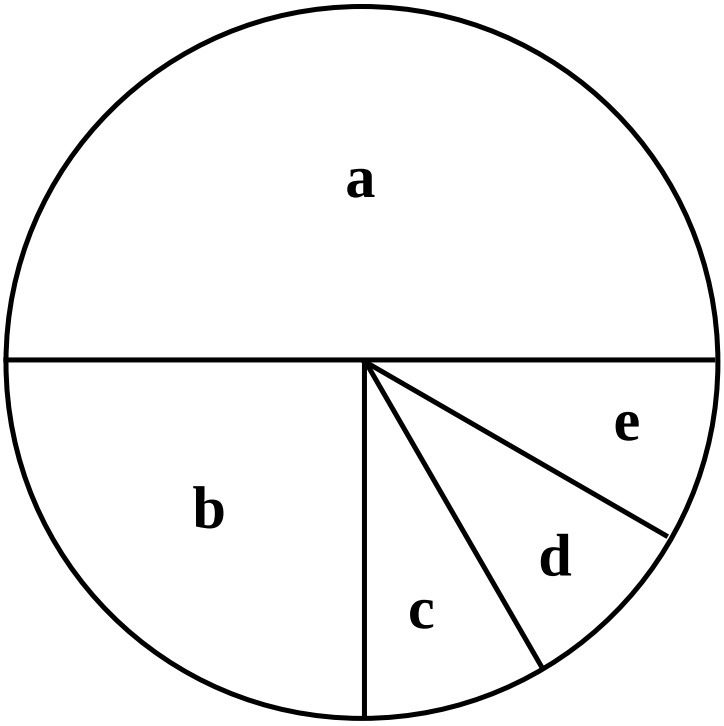


Fractional Part of Rectangle

a._____
b._____
c._____
d._____
e._____

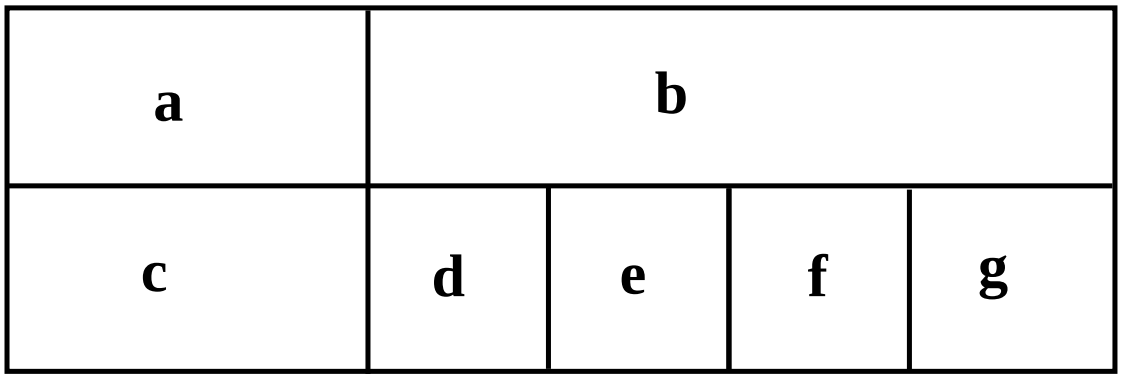
Sentences I can write about the parts:

Transparency 1

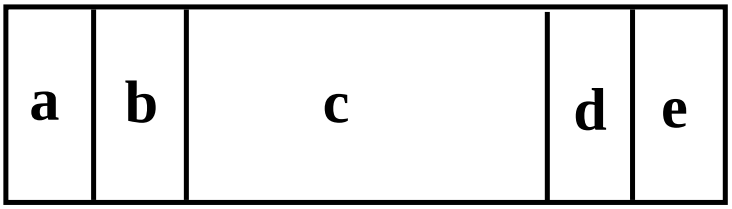


Sentences I can write about the parts:

Transparency 2



Sentences I can write about the parts:



Sentences I can write about the parts:

Post Lesson Reflection

Lesson _____

1) Number of class periods allocated to this lesson: _____

2) Student pages used: _____

3) Adaptations made in lesson development part:
[For example: added extra problems, eliminated problems, changed fractions used]

4) Adaptations made on Student pages:

5) To improve lesson, next time I should: