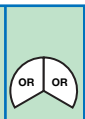
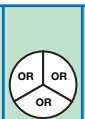
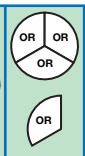
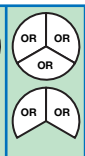
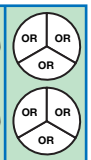
Student Activity Book

Fraction Cover-Up 1 (SAB pp. 197–198)
Questions 1–10

1.* TABLE 1

						
Number of Orange Pieces	1	2	3	4	5	6
Number of Aqua Pieces	2	4	6	8	10	12
Fraction: Number of Orange / Number of Aqua	$\frac{1}{2}$	$\frac{2}{4}$	$\frac{3}{6}$	$\frac{4}{8}$	$\frac{5}{10}$	$\frac{6}{12}$

2.* The denominator is 2 times larger than the numerator.

3.* Yes. Explanations may vary. In each example, if you take $\frac{1}{2}$ and multiply both the numerator and the denominator by the same thing, you will get an equivalent fraction.

4.* $\frac{1}{2}$. The fewest number of fraction pieces makes it.

5. Possible responses: 1, 2; 2, 4; or 3, 6, etc.

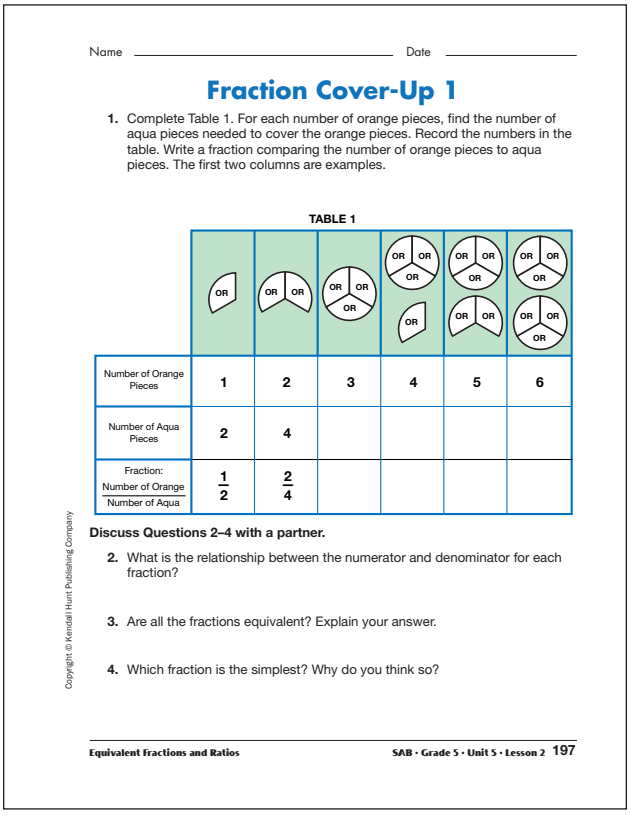
6. 1

7. Possible responses: $\frac{1}{2}$, $\frac{2}{4}$, $\frac{3}{6}$, $\frac{4}{8}$, etc.

8. Possible responses: $\frac{2}{1}$, $\frac{4}{2}$, $\frac{6}{4}$, etc.

9. $\frac{2}{1}$

10. $\frac{1}{2}$



Name _____ Date _____

Fraction Cover-Up 1

1. Complete Table 1. For each number of orange pieces, find the number of aqua pieces needed to cover the orange pieces. Record the numbers in the table. Write a fraction comparing the number of orange pieces to aqua pieces. The first two columns are examples.

TABLE 1

Number of Orange Pieces	1	2	3	4	5	6
Number of Aqua Pieces	2	4				
Fraction: Number of Orange / Number of Aqua	$\frac{1}{2}$	$\frac{2}{4}$				

Discuss Questions 2–4 with a partner.

2. What is the relationship between the numerator and denominator for each fraction?

3. Are all the fractions equivalent? Explain your answer.

4. Which fraction is the simplest? Why do you think so?

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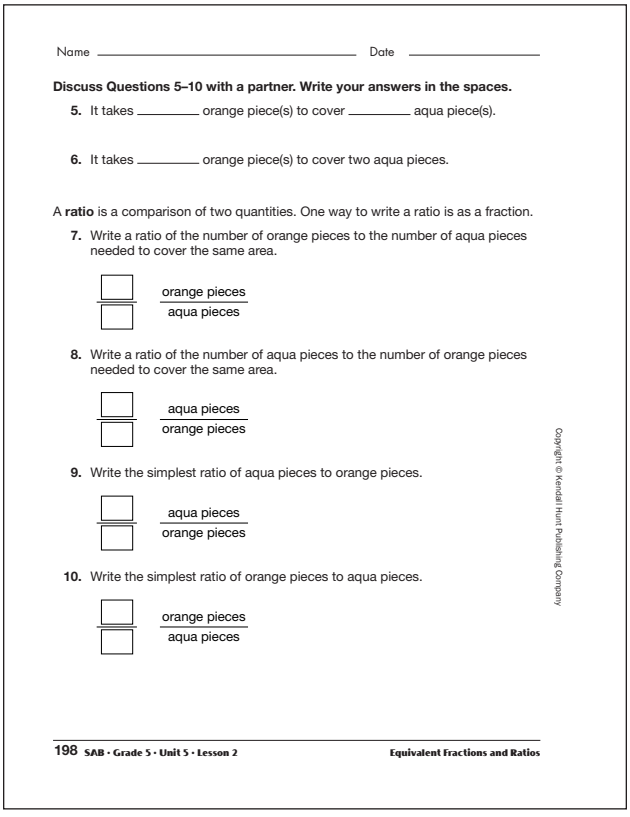

Name _____ Date _____

Discuss Questions 5–10 with a partner. Write your answers in the spaces.

5. It takes _____ orange piece(s) to cover _____ aqua piece(s).

6. It takes _____ orange piece(s) to cover two aqua pieces.

A **ratio** is a comparison of two quantities. One way to write a ratio is as a fraction.

7. Write a ratio of the number of orange pieces to the number of aqua pieces needed to cover the same area.

$\frac{\square}{\square}$ orange pieces / aqua pieces

8. Write a ratio of the number of aqua pieces to the number of orange pieces needed to cover the same area.

$\frac{\square}{\square}$ aqua pieces / orange pieces

9. Write the simplest ratio of aqua pieces to orange pieces.

$\frac{\square}{\square}$ aqua pieces / orange pieces

10. Write the simplest ratio of orange pieces to aqua pieces.

$\frac{\square}{\square}$ orange pieces / aqua pieces

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***Answers and/or discussion are included in the lesson.**

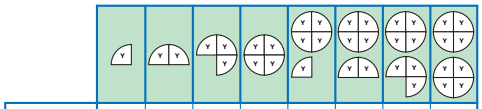
Name _____ Date _____

Fraction Cover-Up 2

1. Complete Table 2. For each row A–E:
   - Find the number of pieces of each color it takes to cover the shape in the top row exactly.
   - In each column, record the fraction of the number of yellow pieces to the number of pieces of the second color. Write an "x" if one of the shapes could not be covered exactly.

   Follow the examples.

TABLE 2



A. Number of Yellow / Number of Blue	$\frac{1}{2}$	$\frac{2}{4}$						
B. Number of Yellow / Number of Pink	×	$\frac{2}{1}$						
C. Number of Yellow / Number of Red								
D. Number of Yellow / Number of Black								
E. Number of Yellow / Number of Orange								

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Name _____ Date _____

Discuss Questions 2–8 with a partner.

2. Which boxes could you not write a fraction for? Why not?

3. What patterns do you notice about the fractions in each row?

4. What is the relationship between the numerator and denominator for each fraction in Row B?

5. Are all the fractions in Row B equivalent? Explain your answer.

6. Are all the fractions in Row E equivalent? Explain your answer.

7. In which rows are the fractions greater than one?

8. Which fraction is the simplest in each row? Why do you think so?

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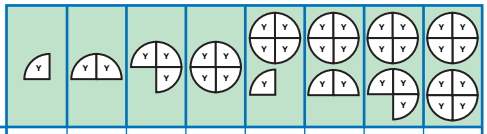
Fraction Cover-Up 2 (SAB pp. 199–201)
Questions 1–14

1. A–E.

TABLE 2



A. Number of Yellow / Number of Blue	$\frac{1}{2}$	$\frac{2}{4}$	$\frac{3}{6}$	$\frac{4}{8}$	$\frac{5}{10}$	$\frac{6}{12}$	$\frac{7}{14}$	$\frac{8}{16}$
B. Number of Yellow / Number of Pink	×	$\frac{2}{1}$	×	$\frac{4}{2}$	×	$\frac{6}{3}$	×	$\frac{8}{4}$
C. Number of Yellow / Number of Red	×	×	×	$\frac{4}{1}$	×	×	×	$\frac{8}{2}$
D. Number of Yellow / Number of Black	$\frac{1}{3}$	$\frac{2}{6}$	$\frac{3}{9}$	$\frac{4}{12}$	$\frac{5}{15}$	$\frac{6}{18}$	$\frac{7}{21}$	$\frac{8}{24}$
E. Number of Yellow / Number of Orange	×	×	×	$\frac{4}{3}$	×	×	×	$\frac{8}{6}$

2.* See chart. You can't cover the two colors evenly.

3. When moving from 1 equivalent fraction to the next the increase in the numerator is consistent and the increase in the denominator is consistent.

4. The numerator is 2 times greater than the denominator.

5. Yes. Explanations may vary. The numerator equals 2 times the denominator.

6. Yes. Explanations may vary. For every 4 yellow pieces, I need 3 orange pieces.

7. Rows B, C, and E

8. The first one listed. Explanations may vary. We look for the relationship using the fewest possible pieces.

***Answers and/or discussion are included in the lesson.**

9. 4 yellow; 1 red
10. 1 yellow; 3 blacks
11. $\frac{1}{4}$
12. $\frac{1}{3}$
13. $\frac{1}{2}$
14. $\frac{4}{3}$

Name _____ Date _____

Use your data in Table 2 to find the ratios in Questions 9–14 with your partner. Write your answers in the spaces.

9. It takes _____ yellow piece(s) to cover _____ red piece(s).

10. It takes _____ yellow piece(s) to cover _____ black piece(s).

11. It takes $\frac{\square}{\square}$ red piece to cover one yellow piece.

12. It takes $\frac{\square}{\square}$ yellow piece to cover one black piece.

13. Write the simplest ratio of yellow pieces to blue pieces needed to cover the same area.

$\frac{\square}{\square}$ $\frac{\text{yellow pieces}}{\text{blue pieces}}$

14. Write the simplest ratio of yellow pieces to orange pieces needed to cover the same area.

$\frac{\square}{\square}$ $\frac{\text{yellow pieces}}{\text{orange pieces}}$

Equivalent Fractions and Ratios **SAB • Grade 5 • Unit 5 • Lesson 2** 201

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Name _____ Date _____

Fraction Cover-Up 3

1. Complete Table 3. For each row A–E:
   - Find the number of pieces of each color it takes to cover the shape in the top row exactly.
   - In each column, record the fraction of the number of yellow pieces to the number of pieces of the second color. Write an "x" if one of the shapes could not be covered exactly.

   Follow the examples.

TABLE 3

						
A. Number of Purple / Number of Green	$\frac{2}{1}$	×				
B. Number of Purple / Number of Yellow	×	$\frac{5}{2}$				
C. Number of Purple / Number of Orange						
D. Number of Purple / Number of Pink						
E. Number of Purple / Number of Red						

Discuss Questions 2–3 with a partner.

2. Which boxes could you not write a fraction for? Why not?

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Name _____ Date _____

3. Decimal fractions also represent fractional parts. Use the red circle as the unit whole.

   A. Work with your partner to show the following decimal fractions with a combination of purple, green, yellow, orange, or pink pieces.

   .5 1.2 .8

   B. Write a common fraction next to the decimal fraction.

   .5 ☐/☐ 1.2 ☐/☐ .8 ☐/☐

Use your data in Table 3 and your fraction circle pieces to find the fractions and ratios in Questions 4–12. The red circle is the unit whole, and decimal fractions represent fractional parts.

4. It takes _____ purple pieces to cover one red piece.

5. **A.** One purple piece covers what fraction of the red circle? ☐/☐

   B. Write a decimal fraction for one purple piece. _____

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Fraction Cover-Up 3 (SAB pp. 203–206)
Questions 1–12

1. A–E.

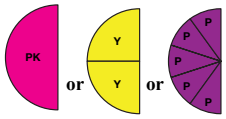
TABLE 3

						
A. Number of Purple / Number of Green	$\frac{2}{1}$	×	$\frac{8}{4}$	$\frac{10}{5}$	×	$\frac{20}{10}$
B. Number of Purple / Number of Yellow	×	$\frac{5}{2}$	×	$\frac{10}{4}$	$\frac{15}{6}$	$\frac{20}{8}$
C. Number of Purple / Number of Orange	×	×	×	$\frac{10}{3}$	×	$\frac{20}{6}$
D. Number of Purple / Number of Pink	×	$\frac{5}{1}$	×	$\frac{10}{2}$	$\frac{15}{3}$	$\frac{20}{4}$
E. Number of Purple / Number of Red	×	×	×	$\frac{10}{1}$	×	$\frac{20}{2}$

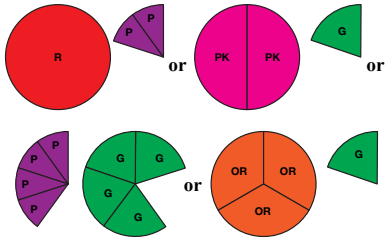
2.* See chart. You can't cover the two colors evenly.

3. A.* Answers will vary.

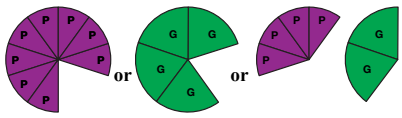
.5 =



1.2 =



.8 =



B. .5 = $\frac{5}{10}$, $\frac{1}{2}$, $\frac{2}{4}$, etc.

1.2 = $1\frac{2}{10}$, $1\frac{1}{5}$, $\frac{12}{10}$, or $\frac{6}{5}$ etc.

.8 = $\frac{8}{10}$, $\frac{4}{5}$

4. 10 purple pieces

5. A. $\frac{1}{10}$

B. .1

***Answers and/or discussion are included in the lesson.**