#### Name \_

### **Ratios**

Essential Question How can you express real world quantities as ratios?



In the example above, you compared a part to a part. You can also use a ratio to compare a part to a whole or a whole to a part.

### **Try This!** Show a ratio of red counters to total counters.



## Share and Show



Find the ratio of red counters to yellow counters.

1a. How many red counters are there?



- **1b.** How many yellow counters are there?
- 1c. What is the ratio of red to yellow counters?

### Write the ratio.

2. squares to circles



3. total squares to dark squares

### On Your Own

For 4–6, use the drawing to write the ratio.

For 7–9, use the drawing to write the ratio.

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- **4.** dark to light**5.** light to dark
- 6. light to total



- total shapes to circles

### For 10-12, write the ratio.

7. triangles to circles

 weekdays to weekend days 11. weekend days to days in a week

8. dark to light

12. days in a week to days in January



13. The ratio of length to width in Gus's driveway is 13 yards to 4 yards. What is this ratio in feet? (Hint: 3 ft = 1 yd)

## **Equivalent Ratios**

**Essential Question** How can you determine if two ratios are equivalent?



### Try This! Use equivalent ratios to find out if 6:8 is equivalent to 18:24.

STEP 1	Write the ratios as fractions.		STEP 2	Write the fractions in simplest form. Then compare.	
	$6:8 = \frac{6}{8}$	$18:24 = \frac{18}{24}$		$\frac{6\div 2}{8\div 2}=\frac{3}{4}$	$\frac{18 \div 6}{24 \div 6} = \frac{3}{4}$

Both ratios equal  $\frac{3}{4}$ , so they are equivalent.

**Math Talk** How does knowing how to simplify fractions help you decide whether two ratios are equivalent?

# Share and Show



Are	the ratios 3:5 and 12:20 equi	ivalent?					
1a.	<ul> <li>Ia. Write both ratios as fractions.</li> <li>Ic. Write both ratios in simplest form.</li> </ul>		<b>1b.</b> Are both ratios in simplest form?				
1c.			1d.	Are the ratios equivalent?			
Writ	e equivalent or not equivalent.						
<b>2.</b> 1 to 3 and 2 to 6			3.	3 to 7 and 1	to 7 and 12 to 21		
Or Writ	<b>Your Own</b> te the equivalent ratio. 5  to  2 =  to  4	<b>5</b> $3 \text{ to } 6 = 7$	• • •		<b>6</b> 7·2 = ·6		
7.	$14 \text{ to } 21 = \ \text{ to } 15$	<b>8.</b> 6:10 =	:30		<b>9.</b> 8 to 9 = 40 to		
Writ	e equivalent or not equivalent.						
10.	3:5 and 21:35	<b>11.</b> 4 to 3 and 3	36 to	24	<b>12.</b> 27:72 and 9:24		
<b>Pr</b> (	<b>oblem Solving REAL</b> Three of every 5 pizzas that Mi Miggy's sold 80 pizzas today. H were cheese?	ggy's Pizza sells low many of the	are ch n wou	ieese pizzas. Ild you expec	ct		