13 **Try This as a Class** Suppose your first two rolls add up to $\frac{8}{6}$.

a. How many triangles do you have? 8 triangles

b. After trading, how many hexagons and triangles will you have? How can you use division to find out? 1 hexagon, 2 triangles; $\frac{8}{6} = 1 \text{ r } 2$

c. What fractional part of a hexagon are the remaining triangles in part (b)? Use this fraction to write the number of hexagons as a mixed number. $\frac{3}{6}, \frac{1}{6}$ hexagons

**Fractions to Mixed Numbers** You can write fractions greater than 1 as mixed numbers by using division. Pattern block trades can show this process.

**Example**

Write the fraction $\frac{10}{6}$ as a mixed number.

**Sample Response**

\begin{align*}
\text{\textbf{How many groups of}} & \quad \text{\textbf{\frac{4}{6} of a}} \\
\text{\textbf{\frac{6}{10}}}} & \quad \text{\textbf{hexagon.}} \\
\end{align*}

\begin{align*}
\text{10} & = 10 \div 6 \\
\frac{1}{6} & = 1 \text{ R} 4 \\
\end{align*}

14 a. Three blue rhombuses make one yellow hexagon, so to find the number of hexagons made by a given number of rhombuses, divide by 3. Then seven blue rhombuses make $\frac{7}{3}$ yellow hexagons.

b. Divide 7 by 3:

\begin{align*}
7 & = 2 \text{ R } 1 \\
1 & = \frac{1}{3}
\end{align*}

14 **Discussion** Three blue rhombuses (♂️) make a yellow hexagon (♀️).

a. Explain why seven blue rhombuses make $\frac{7}{3}$ yellow hexagons.

b. Explain how to write $\frac{7}{3}$ as a mixed number.

**CheckPoint** Write each fraction as a mixed number if possible. If it is not possible, explain why not.

a. $\frac{27}{8}, \frac{3}{5}$

b. $\frac{3}{4}$

c. $\frac{32}{5}, \frac{6}{1}$

d. $\frac{3}{3}$

Not possible; $\frac{3}{3}$ is less than 1.

You can also write mixed numbers as answers to whole number divisions. The Example above shows that $10 \div 6 = \frac{14}{6}$. 

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**Module 4** Mind Games