Equivalent fractions can also be used to describe these window designs.

Original window design has \( \frac{12}{18} \) of the design made from triangles (▲).  
New window design made by replacing the triangles (▲) with rhombuses (◆).

14. An equation can be used to find an equivalent fraction representing the part of the new window that is covered by rhombuses (◆).

\[
\frac{12}{18} = \frac{12 \div ?}{18 \div ?} = \frac{6}{9}
\]

a. Use pattern blocks to create the original window. Check students’ work.

b. How many triangles (▲) can be covered with one rhombus (◆)? How can you use this information to find how many rhombuses you need to replace all of the triangles? by 2.

c. Create the new window. Is \( \frac{6}{9} \) of the new window covered with rhombuses? Explain. Yes; \( \frac{12}{18} = \frac{12 \div 2}{18 \div 2} = \frac{6}{9} \)

d. Why was division used in the equation? What number must replace each question mark? A single rhombus replaces two triangles, so to determine the number of rhombuses you need, divide the number of triangles by 2; 2.

15. Copy and complete the equivalent fractions.

\[
a. \quad \frac{9}{12} = \frac{9 \div 3}{12 \div 3} = \frac{3}{4} \quad b. \quad \frac{4}{6} = \frac{4 + 2}{6 + 2} = \frac{2}{3} \quad c. \quad \frac{8}{16} = \frac{8 \div 2}{16 \div 2} = \frac{1}{2}
\]

\[
d. \quad \frac{64}{72} = \frac{64 \div 8}{72 \div 8} = \frac{8}{9} \quad e. \quad \frac{25}{30} = \frac{25 \div 5}{30 \div 5} = \frac{5}{6} \quad f. \quad \frac{30}{36} = \frac{30 \div 6}{36 \div 6} = \frac{5}{6}
\]

16. Complete each pair of equivalent fractions.

\[
a. \quad \frac{40}{64} = \frac{2}{8} \quad b. \quad \frac{36}{108} = \frac{4}{12} \quad c. \quad \frac{21}{33} = \frac{7}{11}
\]