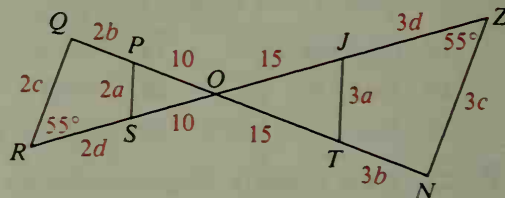


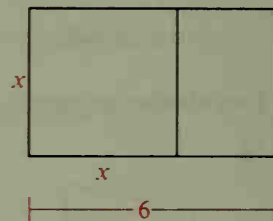
34. The card shown was cut into four congruent pieces with each piece similar to the original. Find the value of x .
35. Quad. *WHAT* is a figure such that $WHAT \sim HATW$. Find the measure of each angle. What special kind of figure must the quadrilateral be?



- C 36. What can you deduce from the diagram shown at the right? Explain.



37. The large rectangle shown is a *golden rectangle*. This means that when a square is cut off, the rectangle that remains is similar to the original rectangle.
- How wide is the original rectangle?
 - The ratio of length to width in a golden rectangle is called the *golden ratio*. Write the golden ratio in simplified radical form. Then use a calculator to find an approximation to the nearest hundredth.



Self-Test 1

Express the ratio in simplest form.

1. 9:15

2. 60 cm to 2 m

3. $\frac{4ab}{6b^2}$

Solve for x .

4. $\frac{x}{8} = \frac{9}{12}$

5. $\frac{x-2}{2} = \frac{x+6}{4}$

6. $\frac{x}{5-x} = \frac{12}{8}$

Tell whether the equation is equivalent to the proportion $\frac{a}{b} = \frac{5}{7}$.

7. $\frac{a}{7} = \frac{b}{5}$

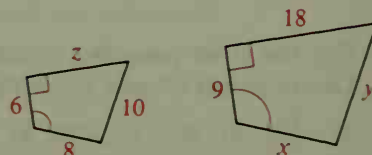
8. $7a = 5b$

9. $\frac{a+b}{b} = \frac{12}{7}$

10. If $\triangle ABC \sim \triangle RST$, $m\angle A = 45^\circ$, and $m\angle C = 60^\circ$, then $m\angle R = \underline{\quad? \quad}$, $m\angle T = \underline{\quad? \quad}$, and $m\angle S = \underline{\quad? \quad}$.

The quadrilaterals shown are similar.

11. The scale factor of the smaller quadrilateral to the larger quadrilateral is $\underline{\quad? \quad}$.
12. $x = \underline{\quad? \quad}$ 13. $y = \underline{\quad? \quad}$ 14. $z = \underline{\quad? \quad}$



15. The measures of the angles of a hexagon are in the ratio 5:5:5:6:7:8. Find the measures.