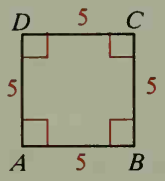
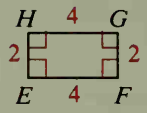
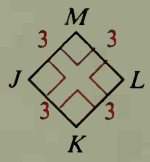
Classroom Exercises

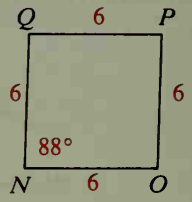
Are the quadrilaterals similar? If they aren't, tell why not.

1. *ABCD* and *EFGH*
2. *ABCD* and *JKLM*
3. *ABCD* and *NOPQ*
4. *JKLM* and *NOPQ*

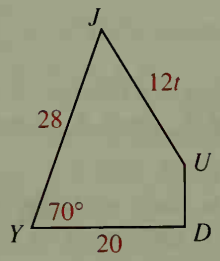


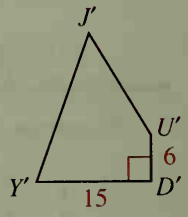






5. If the corresponding angles of two polygons are congruent, must the polygons be similar?
6. If the corresponding sides of two polygons are in proportion, must the polygons be similar?
7. Two polygons are similar. Do they have to be congruent?
8. Two polygons are congruent. Do they have to be similar?
9. Are all regular pentagons similar?
10. Quad. *JUDY* ~ quad. *J'U'D'Y'*. Complete.
    a. $m\angle Y' =$ ___? and $m\angle D =$ ___?.
    b. The scale factor of quad. *JUDY* to quad. *J'U'D'Y'* is ___?.
    c. Find *DU*, *Y'J'*, and *J'U'*.
    d. The ratio of the perimeters is ___?.
    e. Explain why it is not true that quad. *DUJY* ~ quad. *Y'J'U'D'*.





Written Exercises

Tell whether the two polygons are *always*, *sometimes*, or *never* similar.

A

1. Two equilateral triangles
2. Two right triangles
3. Two isosceles triangles
4. Two scalene triangles
5. Two squares
6. Two rectangles
7. Two rhombuses
8. Two isosceles trapezoids
9. Two regular hexagons
10. Two regular polygons
11. A right triangle and an acute triangle
12. An isosceles triangle and a scalene triangle
13. A right triangle and a scalene triangle
14. An equilateral triangle and an equiangular triangle