

## 2.8 Verifying Properties of Triangles

Type	Features	Need to Show....
equilateral	all sides equal	•
isosceles	two sides are equal	•
scalene	no equal sides	•
right	has a $90^\circ$ angle	•

1. P(2,1), Q(5,7) and R(8,4) are the vertices of a triangle.

Classify the triangle.

2. Verify that  $P(-7,1)$ ,  $Q(-8,4)$  and  $R(-1,3)$  are the vertices of a right triangle.

3. The vertices of a triangle are  $A(-3,4)$ ,  $B(-2,-4)$ , and  $C(5,-2)$ .  
 $D$  is the midpoint of  $AC$  and  $E$  is the midpoint of  $AB$ .  
Verify that  $DE$  is parallel to  $BC$  and half its length.

**4. A triangle has vertices A(2,-3), B( -3,5), and C(-2, 4).  
Find the centroid.**

5.  $P(-1, 2)$  is the centroid of a triangle with vertices  $A(2, -3)$ ,  $B(-3, 5)$ , and  $C(-2, 4)$ .

Verify that the centroid divides each median in a 2:1 ratio.