

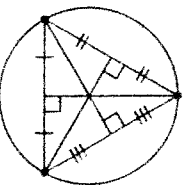
Key Idea

- Some properties of two-dimensional figures are determined by the intersection of lines.

Figure	Properties Determined by the Intersection of Lines or Line Segments	Diagram
triangle	All the medians intersect at the same point, called the centroid.	
	All the perpendicular bisectors intersect at the same point, called the circumcentre. The three vertices of the triangle are the same distance from this point.	
	All the altitudes intersect at the same point, called the orthocentre.	

Need to Know

- In an equilateral triangle, the medians, perpendicular bisectors, and altitudes intersect at the same point.



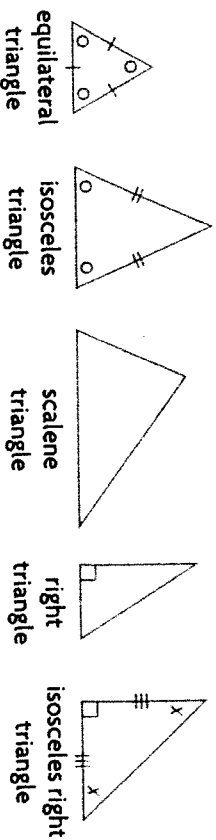
Key Idea

- When a geometric figure is drawn on a coordinate grid, the coordinates of its vertices can be used to calculate the slopes and lengths of the line segments, as well as the coordinates of the midpoints.

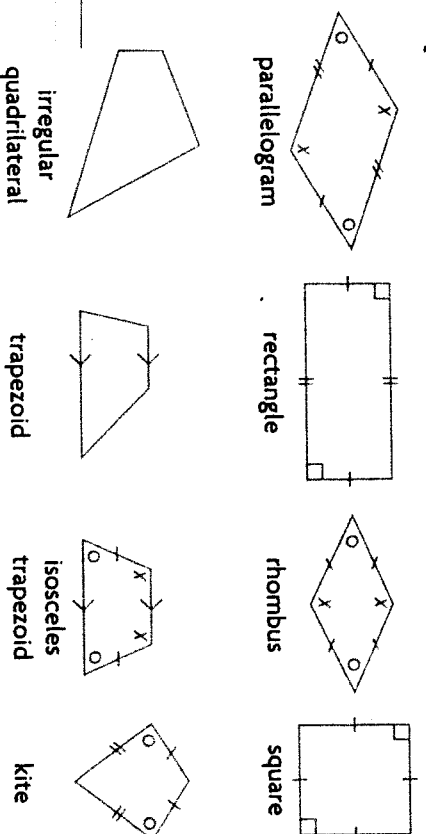
Need to Know

- Triangles and quadrilaterals can be classified by the relationships between their sides and their interior angles.

Triangles



Quadrilaterals



- To solve a problem that involves a geometric figure, it is a good idea to start by drawing a diagram of the situation on a coordinate grid.
- Parallel lines have the same slope.
- Perpendicular lines have slopes that are negative reciprocals.