6.7 Polygons in the Coordinate Plane

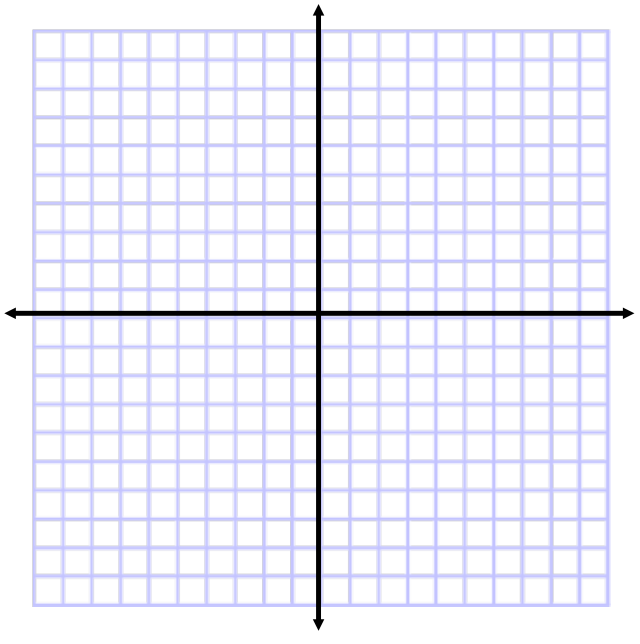
Objective: To classify polygons in the coordinate plane.

Distance Formula:

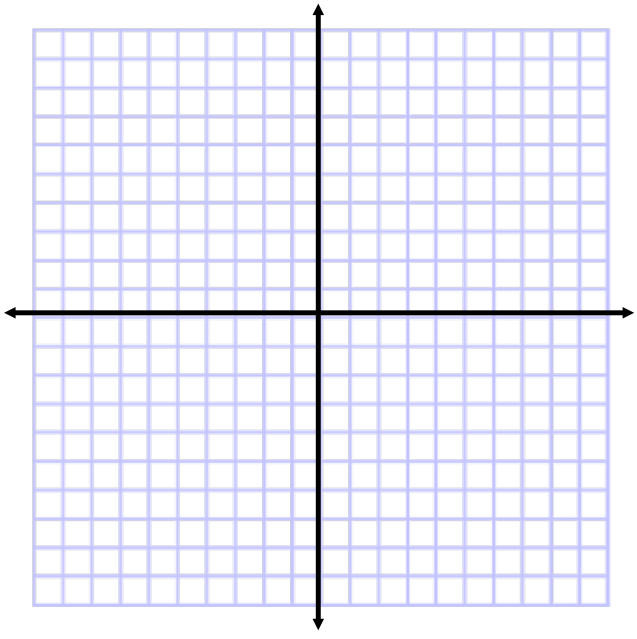
Midpoint Formula:

Slope Formula:

Example 1: Triangle DEF has vertices D(0, 0), E(1, 4), and F(5, 2). Is triangle DEF scalene, isosceles, or equilateral?



Example 2: Parallelogram MNPQ has vertices M(0,1), N(-1, 4), P(2, 5), and Q(3, 2). Is MNPQ a rectangle or a square?



Example 3: An isosceles trapezoid has vertices A(0, 0), B(2, 4), C(6, 4) and D(8, 0). What special quadrilateral is formed by connecting the midpoints of the sides of ABCD?