Name: _____

1.) Given a pentadecagon, find;

     a.) the sum of the interior angles;

     b.) the sum of the exterior angles;

     c.) the measure of each interior angle if the polygon is regular.

2.) You are given two regular polygons, a pentagon and a heptagon. If one exterior angle is chosen form each, which of these regular polygons has the larger exterior angle? How much larger is the angle? Briefly explain and show your work!

3.) A decagon has three angles with measures of 54° and two other angles with measures of 125°. Find the measure of any one of the remaining angles if they are all congruent to each other.
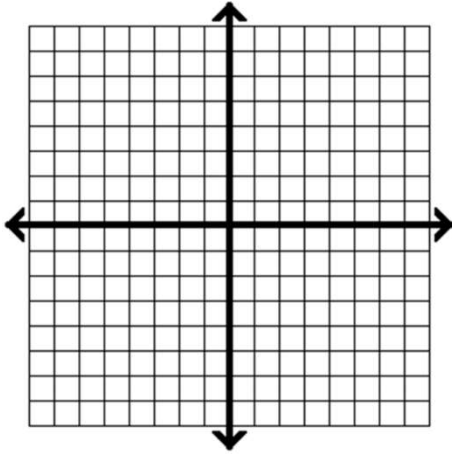
4.) Find the value of x in the diagram below.
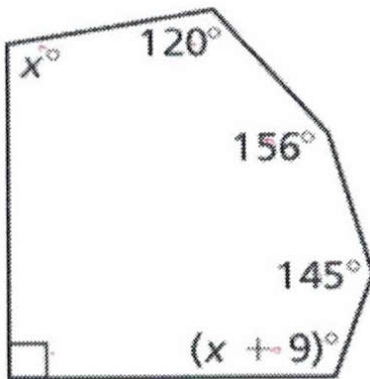
5.) Three vertices of $\square JKLM$ are $J(-2,-1), K(0,2),$ and $L(4,3)$.

    a.) Find the coordinates of the fourth vertex M.

    b.) Find the coordinates of the intersection of the diagonals of $\square JKLM$.
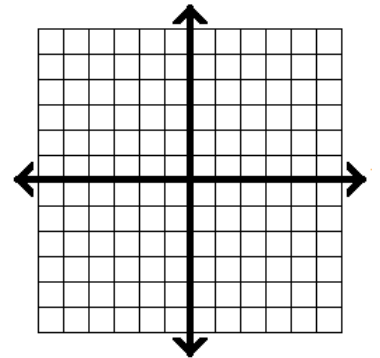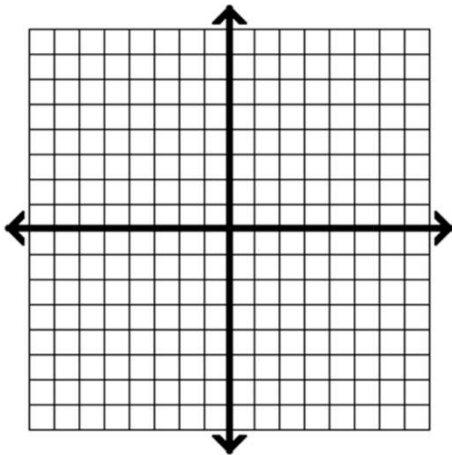
Find the most descriptive name for each quadrilateral below. You must show your work and explain!

6.) Quadrilateral *ABCD* with vertices: $A(-4,1)$ $B(0,4)$ $C(4,0)$ $D(-4,-6)$.

7.) Quadrilateral *EFGH* with vertices: $E(-4,1)$ $F(-5,6)$ $G(0,5)$ $H(1,0)$.

8.) Quadrilateral *NPRS* with vertices: $N(-4,0)$ $P(-2,3)$ $R(4,-2)$ $S(2,-5)$.