 Name: _____

10.REV.2 ~ Lessons 10.4 – 10.7

Past due on: _____ Period: _____

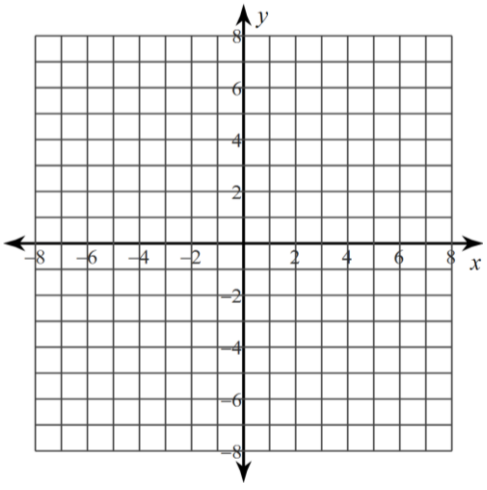
SHOW ALL WORK ON A SEPARATE SHEET OF PAPER.

Use the formulas and facts associated with the interior and exterior angles of polygons to solve the following problems.

1. Find the sum of the interior angle measures of a polygon with 32 sides.
2. Find the measure of one interior angle of a regular 16-gon.
3. Find the measure of one exterior angle a regular 32-gon.
4. The exterior angle of a regular polygon is 24°. How many sides does the polygon have? What is the sum of the measures of its interior angles?
5. Each interior angle of a regular polygon is equal to 160°. How many sides does the polygon have?
6. In heptagon ABCDEFG, m∠A = 95°, m∠B = 125°, m∠D = m∠E = 130°, and ∠C ≅ ∠F ≅ ∠G. Find m∠F.
7. The sum of the interior angles of a polygon is 3420°. How many sides does the polygon have?
8. What special parallelogram is formed (a) when the diagonals of a parallelogram are congruent? (b) when the diagonals are perpendicular? (c) when the diagonals are both congruent and perpendicular?

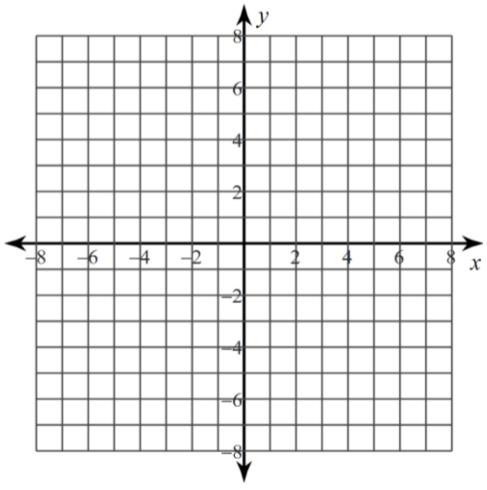
Graph the quadrilateral described. Find the indicated measures. Explain why $FGHJ$ is the quadrilateral identified.

9. $F(-4,-2), G(-2,2), H(4,3), J(2,-1)$



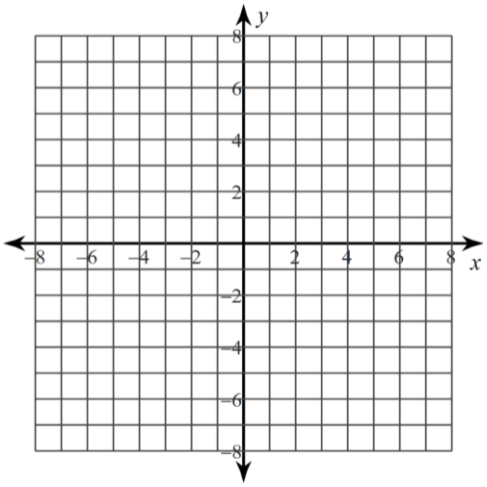
Find $m_{FG}, m_{HJ}, FG, \& HJ$. Explain how these measurements prove that $FGHJ$ is a parallelogram.

10. $F(-4,-1), G(-3,2), H(3,0), J(2,-3)$



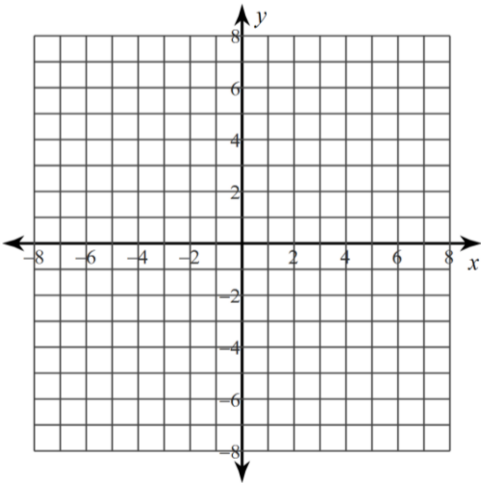
Find m_{FG}, m_{HJ}, m_{GH} & m_{FJ}. Explain how these measurements prove that $FGHJ$ is a parallelogram and a rectangle.

11. $F(-5,-1), G(-2,4), H(3,1), J(0,-4)$



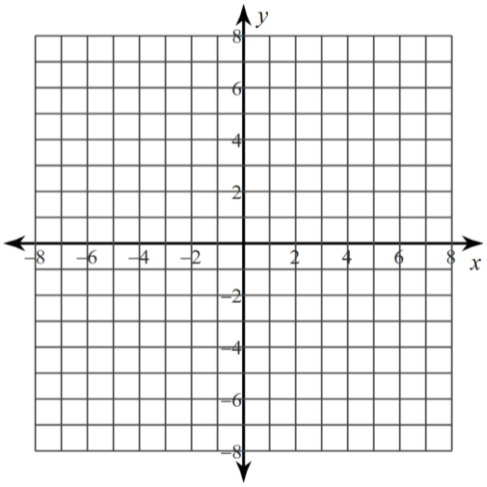
Find $m_{FG}, m_{HJ}, m_{GH}, m_{FJ}, m_{FH}$ & m_{GH}. Explain how these measurements prove that $FGHJ$ is a parallelogram and a square.

12. $F(-4,6), G(2,5), H(3,-1), J(-3,0)$



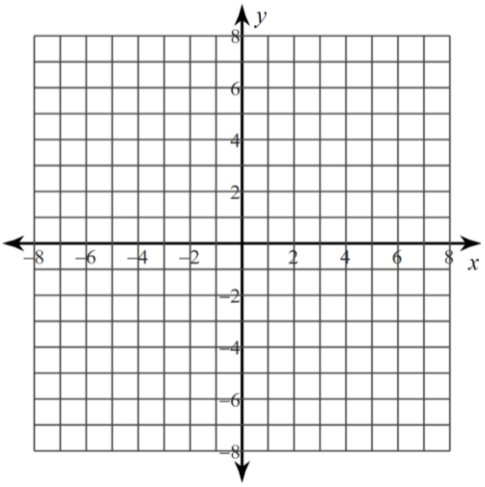
Find m_{FH}, m_{GJ}, FH, GJ & the midpoints of FH & GJ. Explain how these measurements prove that $FGHJ$ is a parallelogram and a rhombus.

13. $F(-1,3), G(3,4), H(2,0), J(-3,-2)$



Find $FG, GH, HJ,$ & FJ. Explain how these measurements prove that $FGHJ$ is a kite.

14. $F(-4,-3), G(0,3), H(4,3), J(8,-3)$



Find $m_{GH}, m_{FJ}, m_{GF}, m_{HJ}, FH$ & GJ. Explain how these measurements prove that $FGHJ$ is an isosceles trapezoid.