

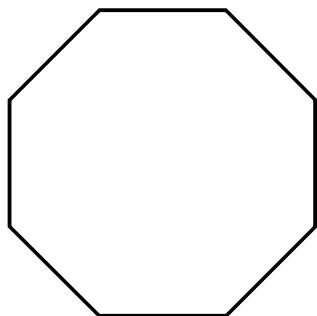
**GRADE 12 ESSENTIAL
POLYGON PRACTICE
GEOMETRY**

Name: _____

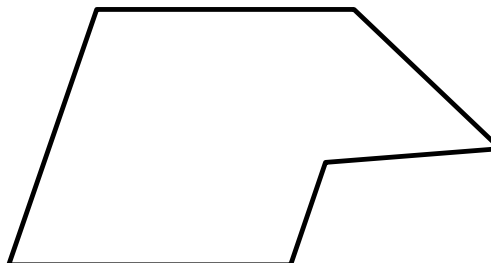
Date: _____

1. Calculate the **sum** of the interior angles in each polygon.

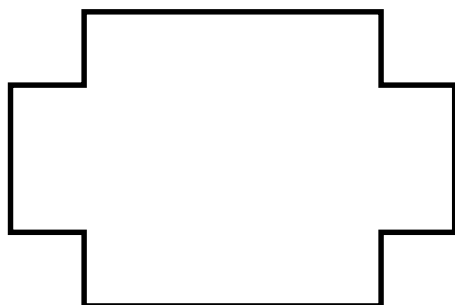
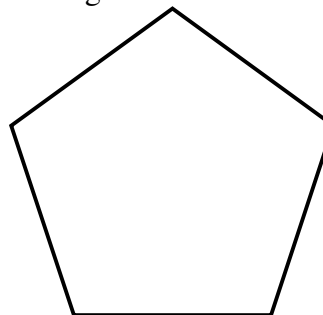
Regular Octagon



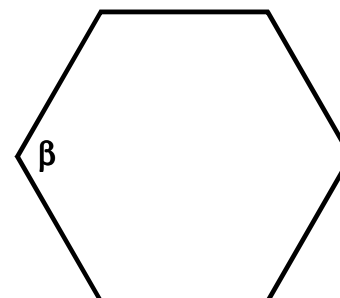
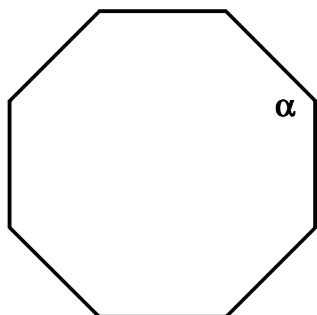
A convex polygon:



A regular Pentagon

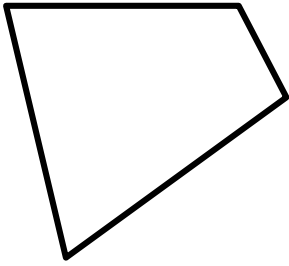


2. Calculate the angle of each vertex of the regular polygon

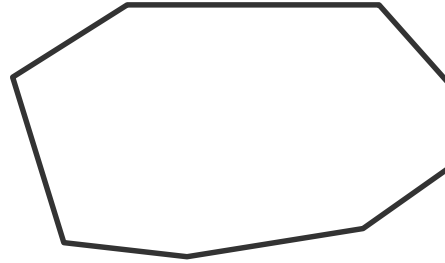


3. What quantity, d , of 'diagonals' can be drawn between the all the vertices of the polygon: *Hint: $[d = n*(n - 3)] / 2$*

a.



b.



c. A twelve sided polygon

d. 25 sided polygon

e. a 50 sided polygon

f. a 65 sided polygon

4. Monique and Josie are having a water balloon fight. They fill up their balloons at the same source. Josie runs 15 metres to the NorthEast (NE) and stops, Monique runs 12 metres straight West and stops. At what angle and direction must each throw their balloons to hit the other?

5. If three hot dogs and four cokes cost \$13.00 and if a hot dog costs \$2.00 more than a coke; how much does each cost?

6. **Way Advanced.** Now try it for : If three hot dogs and four cokes cost \$9.55 and if a hot dog costs \$0.68 more than a coke; how much does each cost?