Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Properties and Attributes of Polygons

Review

**1.** A ? is a three-sided polygon.

**2.** A ? is a four-sided polygon.

**Evaluate each expression for *n* = 6.**

**3.** (*n* – 4) 12

**4.** (*n* – 3) 90

**Solve for *a*.**

**5.** 12*a* + 4*a* + 9*a* = 100

Each segment that forms a polygon is a **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**.

The common endpoint of two sides is a **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**.

A segment that connects any two nonconsecutive vertices is a

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**.



You can name a polygon by the number of its sides. The table shows the names of some common polygons.

A polygon is a closed plane figure formed by **three** or more segments that **intersect** only at their **endpoints**.

**Remember!**

Example 1A: Identifying Polygons

**Tell whether the figure is a polygon. If it is a polygon, name it by the number of sides.**



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All the sides are congruent in an equilateral polygon. All the angles are congruent in an equiangular polygon. A **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** is one that is both equilateral and equiangular. If a polygon is not regular, it is called irregular.

A polygon is **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** if any part of a diagonal contains points in the exterior of the polygon. If no diagonal contains points in the exterior, then the polygon is **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**. A regular polygon is always convex.

  

**Tell whether the polygon is regular or irregular. Tell whether it is concave or convex.**



**Tell whether the polygon is regular or irregular. Tell whether it is concave or convex.**



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