Geometry

1.6 Classify Polygons

# Polygons

What is it like?

straight

* Sides are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ lines.

ends

* Sides only intersect at \_\_\_\_\_\_\_\_\_\_.

Closed shape

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

No curves

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## Convex and Concave

Convex

poke out of shape

* All angles \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

concave

convex

\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_

through the middle

* A line containing a side does NOT go \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the shape.

Concave

convex

* Not \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

cave

* There’s a “\_\_\_\_\_\_\_\_\_\_\_\_\_”.

concave

concave

convex

convex

\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_

## Equilateral and Equiangular

Equilateral

length

sides

* All \_\_\_\_\_\_\_\_\_\_\_\_\_ are same \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Equiangular

measure

angles

* All \_\_\_\_\_\_\_\_\_\_\_\_\_ are same \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Regular Polygon

equiangular

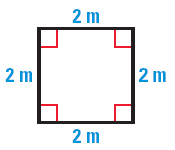
equilateral

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Number of Sides | | 3  triangle | | 4 | | 5 | | 6 | | 7 | |
| Type of Polygon | |  | | quadrilateral | | pentagon | | hexagon | | heptagon | |
| Example | |  | |  | |  | |  | |  | |
| Number of Sides | 8 | | 9  nonagon | | 10 | | 12 | | 13 | | n |
| Type of Polygon  octagon |  | |  | | decagon | | dodecagon | | 13-gon | | n-gon |
| Example |  | |  | |  | |  | |  | |  |

Sketch an example of a convex heptagon.

Sketch an example of a concave heptagon.



Classify the polygon shown

Regular quadrilateral

The Pentagon Building is a regular pentagon. If two of the angles are (2x – 14)° and (3x – 75)°. Find the measure of each angle.

2x-14 = 3x-75

-14 = x-75

61 = x

Angles are 2(61) – 14 = 108



Assignment: 44 #4-36 even, 40, 44-54 even = 24 total