Honors Geometry

Notes Section 1.6
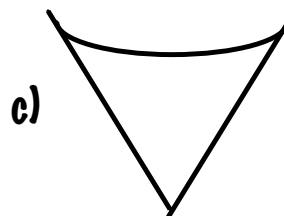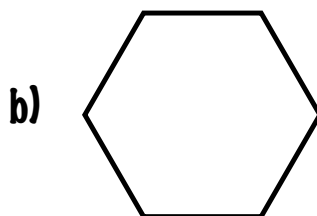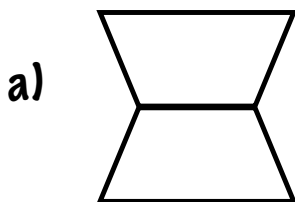## Classify Polygons

VOCABULARY

Polygon: a closed sided figure

Side: line segment of a polygon

Vertex: common endpoint of 2 sides of a polygon

Convex: if **NO** line that contains a sided contains a point in the interior of the polygon.

Concave: if a line that contains a sided contains a point in the interior of the polygon.

n-gon: a polygon with 11 or 13 or more sides

equilateral: a polygon with all sides congruent

equiangular: a polygon with all angles congruent

regular: a polygon with all sides & all angles congruent

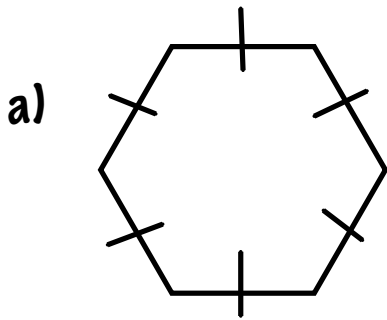| # of sides	Type of Polygon
3	Triangle
4	Quadrilateral
5	Pentagon
6	Hexagon
7	Heptagon
8	Octagon
9	Nonagon
10	Decagon
12	Dodecagon
n	n-gon

Example 1

Tell whether the figure is a polygon and whether it is convex or concave.

a)   b)   c)   d)

Example 2

Classify by the number of sides. Tell whether the polygon is equilateral, equiangular or regular.

a)

b)

c)
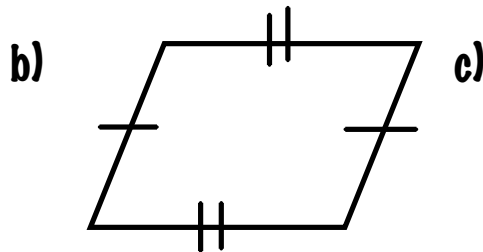
~~~~~~~~~~~~~~~   ~~~~~~~~~~~~~~~   ~~~~~~~~~~~~~~~

~~~~~~~~~~~~~~~   ~~~~~~~~~~~~~~~   ~~~~~~~~~~~~~~~

Example 3

Find the length of the side.

(3x+6)in

(4x-2)in.