

Introduction to Polygons

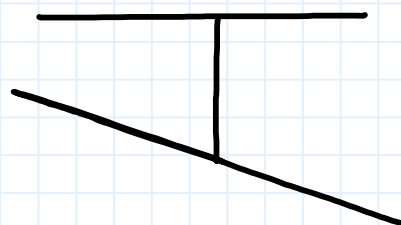
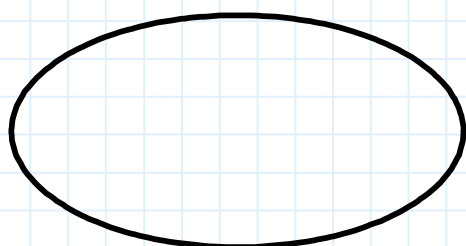
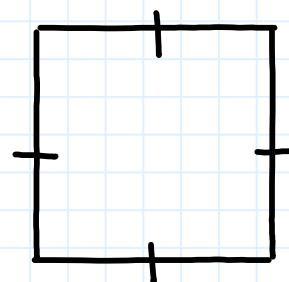
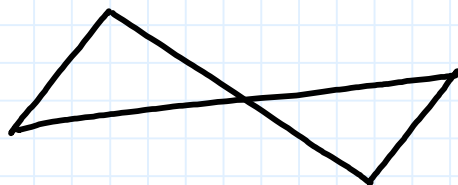
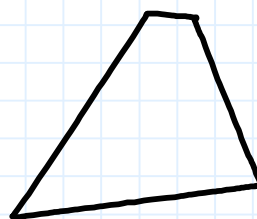
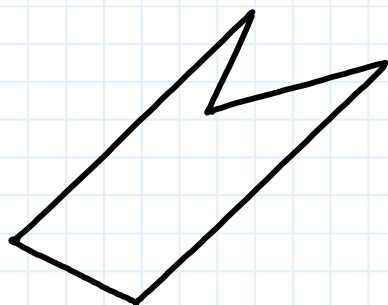


Overview of problems

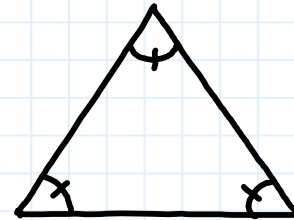
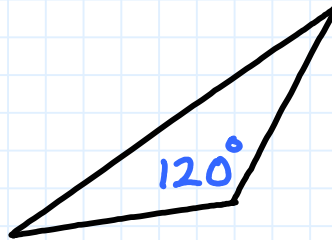
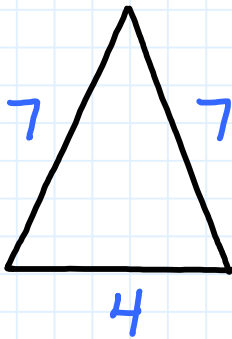
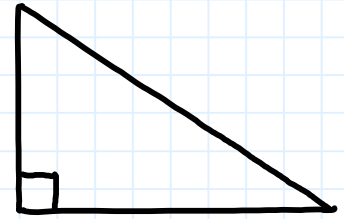
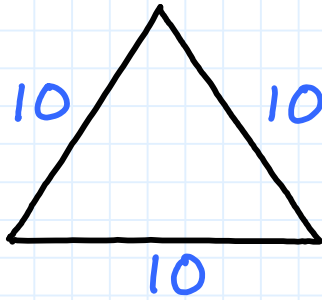
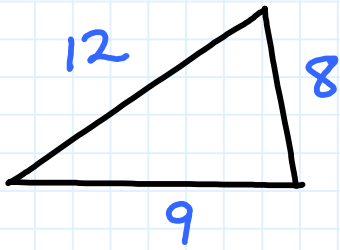


Example Set: A

Determine if the figures are polygons. For those that are polygons classify what type.



Classify each triangle



Example Set: B

Find the sum of the interior and exterior angles of the following n -sided regular polygons

7 sides

23 sides

36 sides



Example Set: C

A polygon has an interior angle sum of 1080. How many sides does it have?

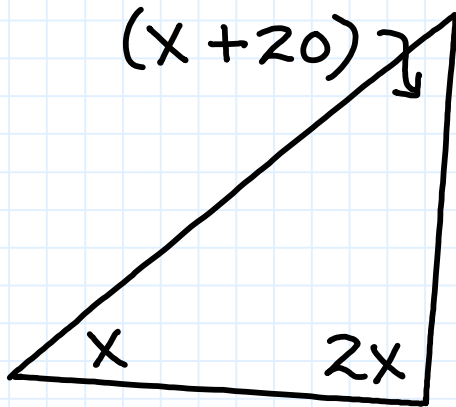
Four of the angles of a pentagon have measures of 45, 70, 130, 200. Find the measure of the fifth angle.



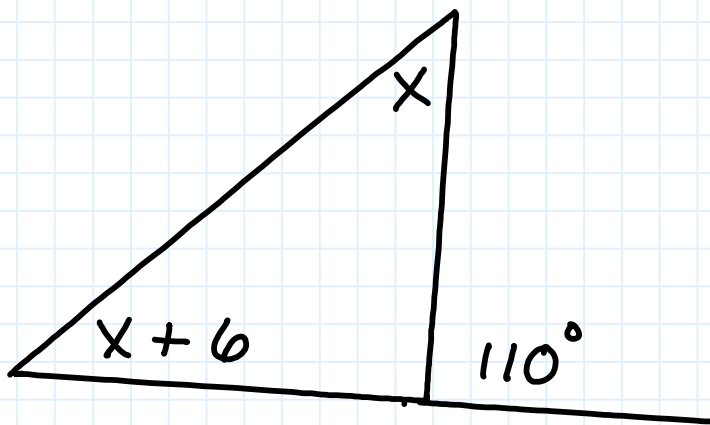
Example Set: D

The sum of the measures of the interior angles of a regular polygon is five times the sum of the measure of its exterior angles. How many sides does the polygon have?

Find the angles of the triangle



Find each angle measure of the triangle



Introduction to Polygons



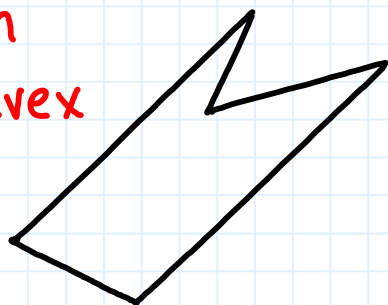
Overview of problems- KEY



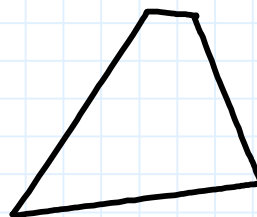
Example Set: A

Determine if the figures are polygons. For those that are polygons classify what type.

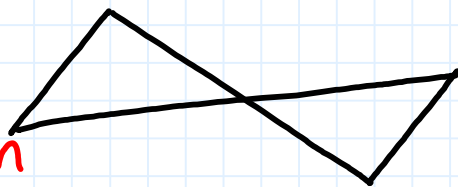
polygon
non-convex



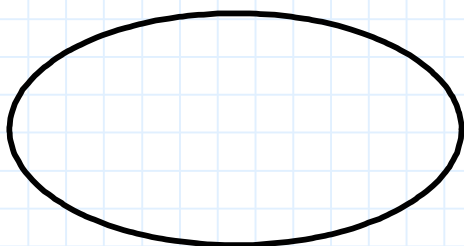
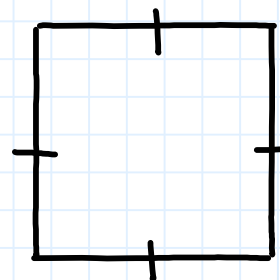
polygon
convex



not a
polygon

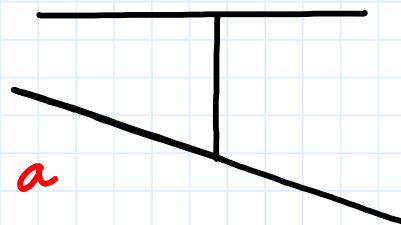


polygon
convex

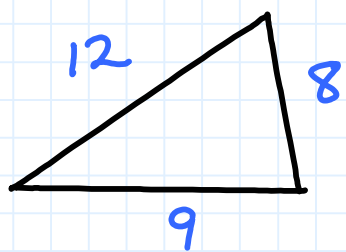


not a
polygon

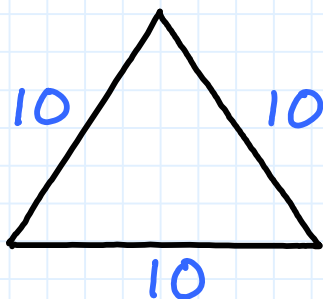
not a
polygon



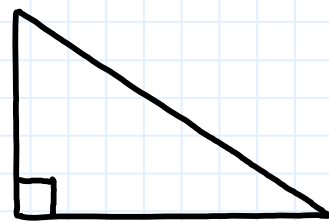
Classify each triangle



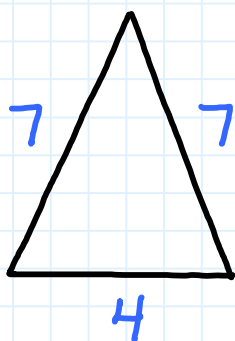
Scalene Δ



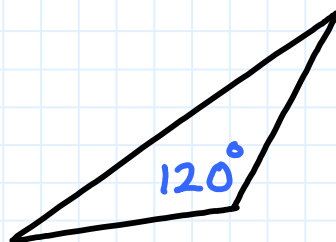
Eq. Δ



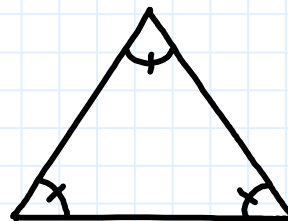
Right Δ



Iosc. Δ



Obtuse Δ



Eq. Δ



Example Set: B

Find the sum of the interior and exterior angles of the following n -sided regular polygons

7 sides ext. $\angle = 360^\circ$ int. $\angle = 900^\circ$

23 sides ext. $\angle = 360^\circ$ int. $\angle = 3780^\circ$

36 sides ext. $\angle = 360^\circ$ int. $\angle = 6120^\circ$



Example Set: C

A polygon has an interior angle sum of 1080. How many sides does it have?

8 sides

Four of the angles of a pentagon have measures of 45, 70, 130, 200. Find the measure of the fifth angle.

95

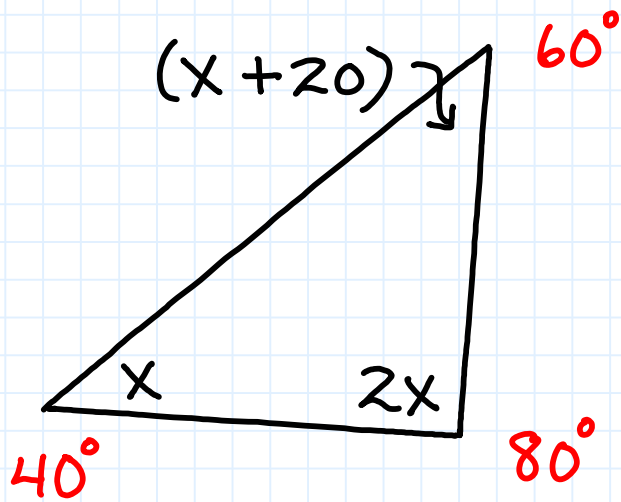


Example Set: D

The sum of the measures of the interior angles of a regular polygon is five times the sum of the measure of its exterior angles. How many sides does the polygon have?

12 sides

Find the angles of the triangle



Find each angle measure of the triangle

