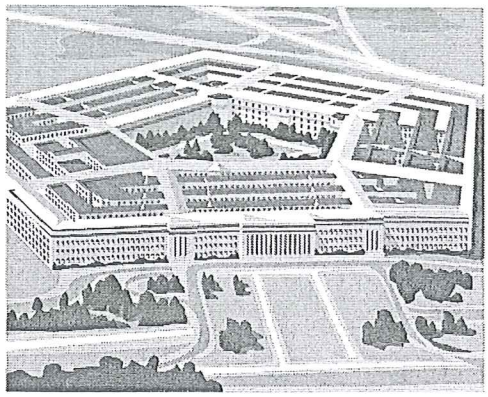
Geometry Notes: 1-6; *Polygons*

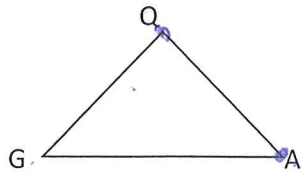
Name Key Date 9/28



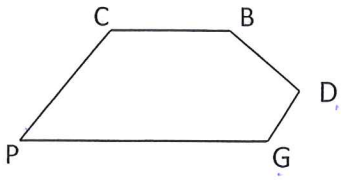
polygon: a closed figure whose sides are segments, and whose sides intersect only two other sides and only at their endpoints

***Named by their vertices in consecutive order.

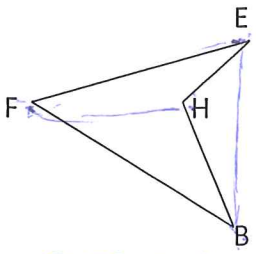
Name these polygons:



AGO

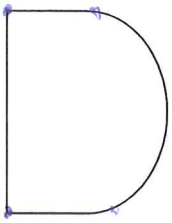


BCPGD



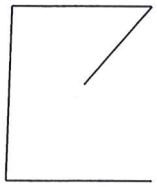
BFEH

Are the following polygons? Why or why not?

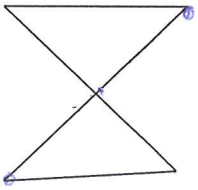


No; Curved Side

convex polygon

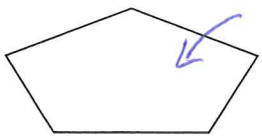


No; open Not closed

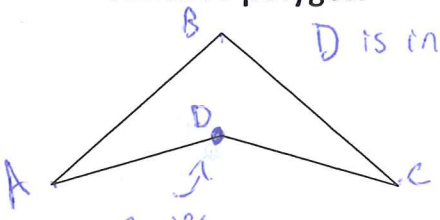


No; sides can not intersect.

concave polygon



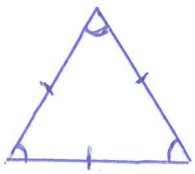
No points are interior

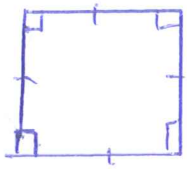


3 Triangle / 4 Quadrilateral / 5 Pentagon / 6 hexagon (caves in) / 7 heptagon / 8 octagon

See the chart on page 46. Learn the names of each polygon up to those with 12 sides; A polygon with "n" sides is called a(n) n gon.

regular polygon: a convex polygon that has ALL congruent sides AND ALL congruent angles. Draw some examples.



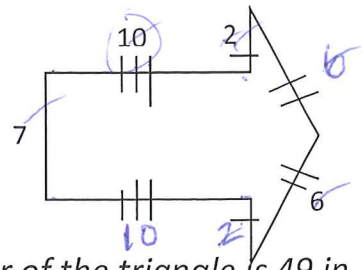


perimeter:

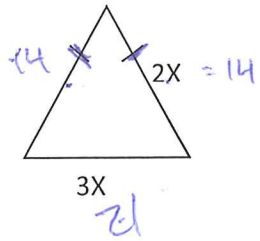
17 14
25
31
33

example: Find the perimeter.

43 units



example: Find the length of each side if the perimeter of the triangle is 49 in.



$2x + 3x + 2x = 49$

$7x = 49$

$x = 7$

14"
14"
21"

example: How many meters of edging should you buy for a flower garden whose length is 5.7m and width is 3.8m? (Edging is sold in 5m lengths.)

Perimeter 19 m

20 meters

4 sheets

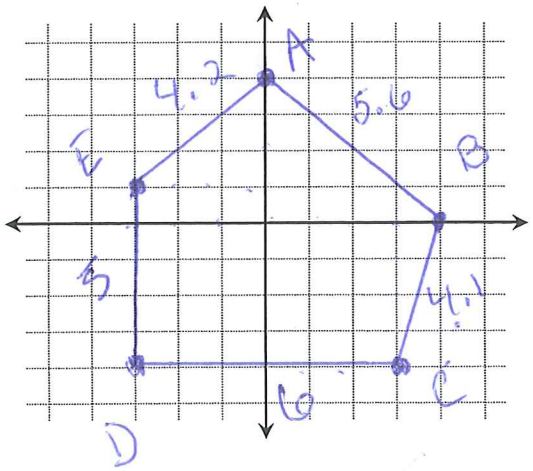
5.7 m

3.8

3.8

5.7

example: Find the perimeter of pentagon ABCDE if A(0,4), B(4,0), C(3,–4), D (–3,–4), E (–3, 1). Hint: you will need a formula ☺. Write it here: distance formula



$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$

$\sqrt{16 + 16}$

$\sqrt{32} = 5.6$

$\sqrt{18} = 4.2$

4.1

24.9