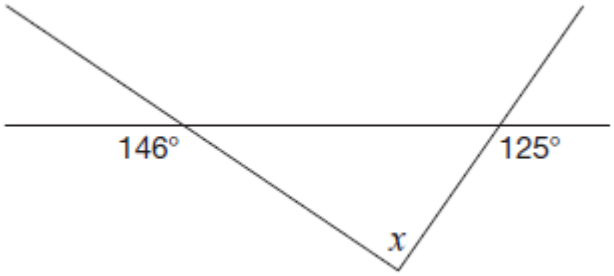
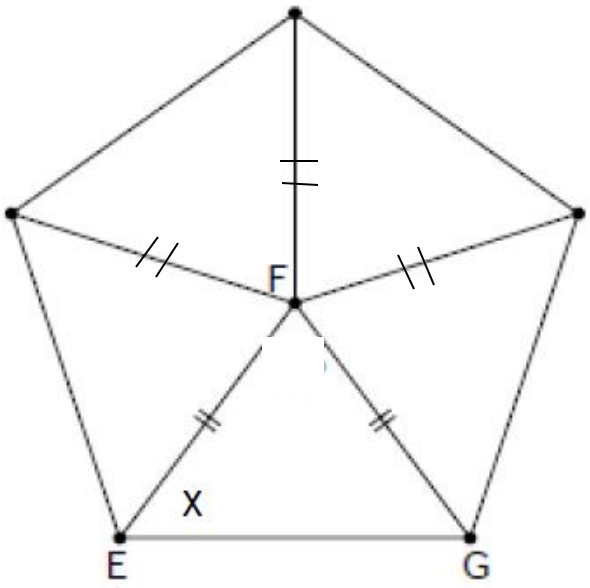
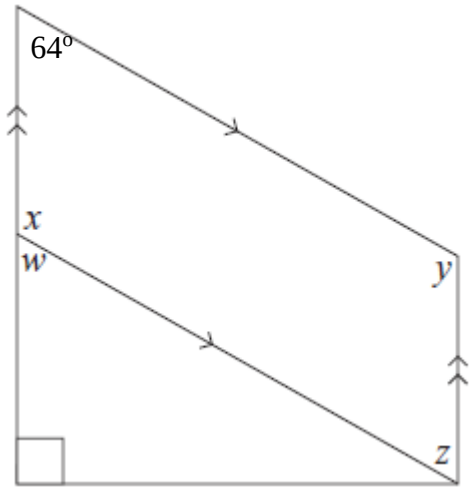
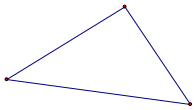
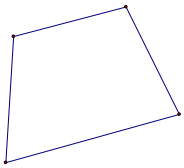
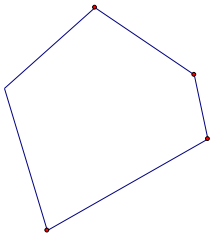
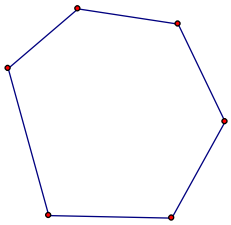
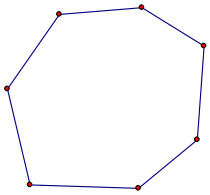
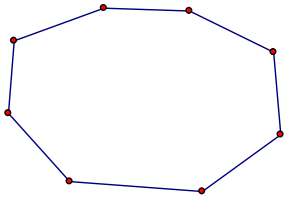
WARM UP – find the unknown angles (as indicated by the variable)





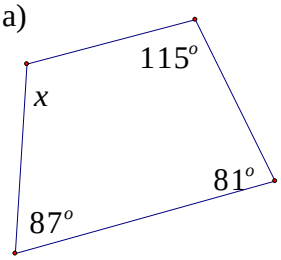


Interior Angles of all Polygons

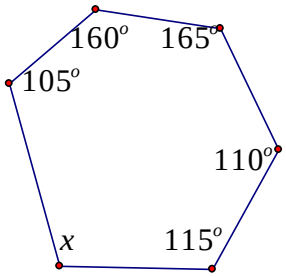
Polygon	**Number of sides** (n)	**Number of triangles**	**Sum of interior angles** (based on number of triangles)
Triangle 			
Quadrilateral 			
Pentagon 			
Hexagon 			
Heptagon 			
Octagon 			

Ex. 1 Find the missing measures.

a)

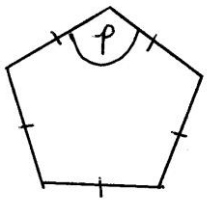


b)



Ex 2. In a REGULAR polygon all sides and all angles have equal measures.

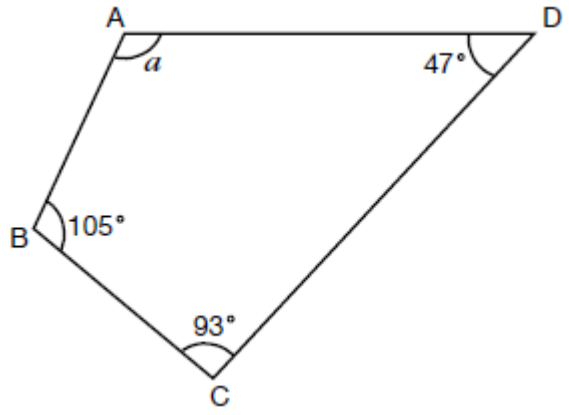
a) Find the measure of the angle *p* in the regular polygon pictured below.



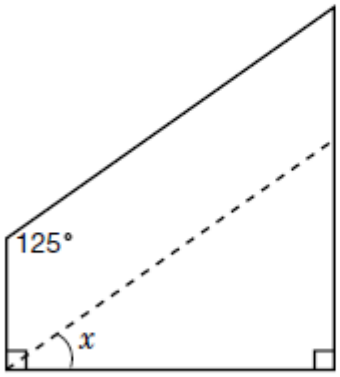
b) A stop sign is an example of a regular octagon. Find the measure of the each vertex in a stop sign. Include a diagram with your solution.

Angles & Polygons

1. Solve for *a*.

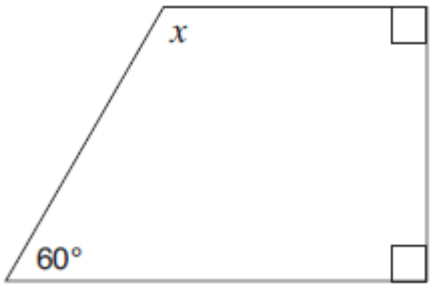


2. Teresa needs to cut a piece of wood in order to make a parallelogram. She marks a line on the wood where she will cut.

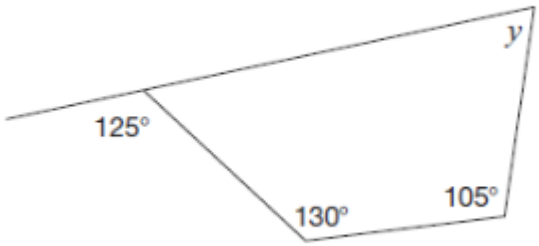


What is the size of angle x?

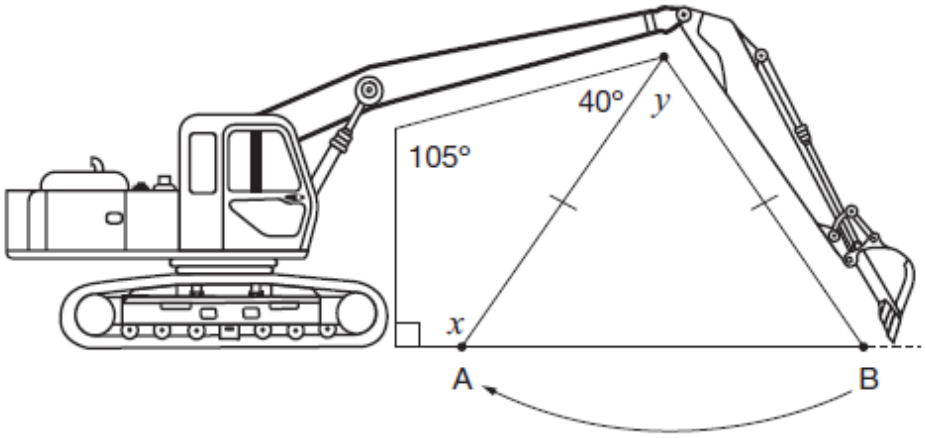
3. Solve for x.



4. Solve for *y*.

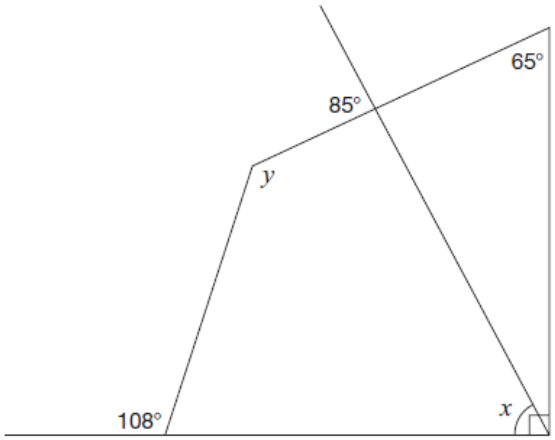


5. A hydraulic arm swings from Point B to Point A, as shown in the diagram below.

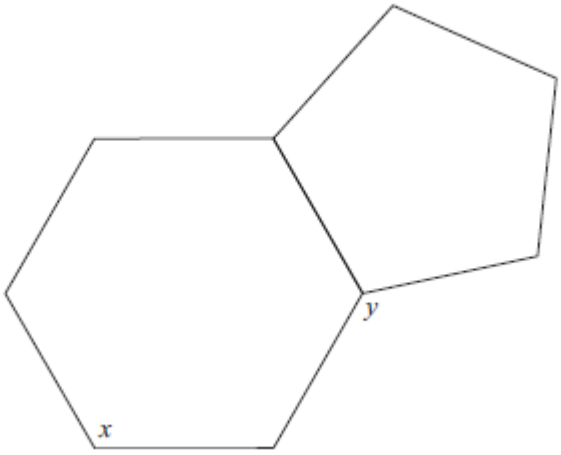


Determine the values of x and y.

6. Solve for *x* and *y*.



7. A regular hexagon and a regular pentagon are joined as shown below.



Find the value of x and y.

8. text page 371 #1bd, 4d, 7

ANSWERS

1. a = 115 **2.** x = 35 **3.** x = 120 **4.** y = 70 **5.** x=125, y=70 **6.** x = 60, y=133 **7.** x = 120, y = 132