FUNCTION RULE POLYGON ACTIVITY (# OF DIAGONALS)

1) **Fill–in the table below. It may help to draw a picture of the polygon to find the number of diagonals.**

Type of Polygon	Number of Sides	Number of Vertices	Number of Diagonals
Triangle			
Quadrilateral			
Pentagon			
Hexagon			
Heptagon			
Octagon			
Nonagon			
Decagon			

2) **Create the function rule D(v) to find the total number of diagonals depending upon the number of vertices of a polygon. Use the table on the back of this sheet to help you organize the information at creating the function rule.**

Let v = Number of vertices in a polygon
D(v) = Total # of diagonals in a polygon of v vertices.

3) **Calculate the number of diagonals if a polygon has 100 vertices. Show your work by using the function rule you found from #2.**

# of Vertices	# of Diagonals Per Vertex	Total # of Diagonals (No Duplicates)
3		
4		
5		
6		
7		
8		
9		
10		