Ready, Set, Go!

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Ready

Topic: Polygons, definition and names

1. What is a polygon? Describe in your own words what a polygon is.

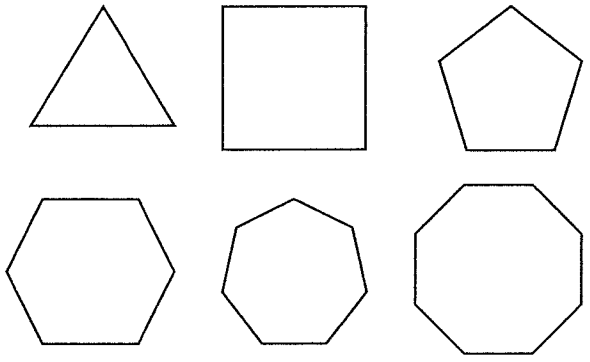
2. Fill in the names of each polygon based on the number of sides the polygon has.

Number of Sides	Name of Polygon
3	
4	
5	
6	
7	
8	
9	
10	

Set

Topic: Lines of symmetry and diagonals

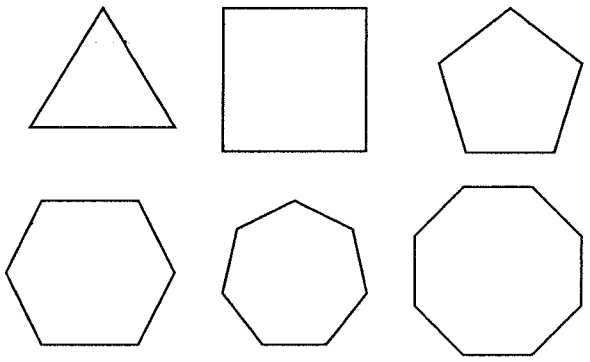
3. Draw the lines of symmetry for each regular polygon, fill in the table including an expression for the number of lines of symmetry in a ***n***-sided polygon.



Number of Sides	Number of lines of symmetry
3	
4	
5	
6	
7	
8	
n	

4. Find

all of the diagonals in each regular polygon. Fill in the table including an expression for the number of diagonals in a ***n***-sided polygon.



Number of Sides	Number of diagonals
3	
4	
5	
6	
7	
8	
n	

5. Are all lines of symmetry also diagonals? Explain.

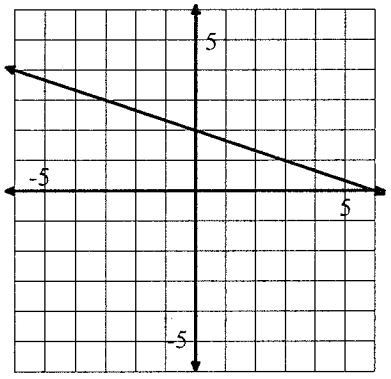
6. Are all diagonals also lines of symmetry? Explain.

7. What shapes will have diagonals that are not lines of symmetry? Name some and draw them.

8. Will all parallelograms have diagonals that are lines of symmetry? If so, draw and explain. If not draw and explain.

Go

Topic: Equations for parallel and perpendicular lines.

	Find the equation of a line PARALLEL to the given info and through the indicated point.	**Find the equation of a line PERPENDICULAR to the given line and through the indicated point.**
9. Equation of a line: $y = 4x + 1$.	a. Parallel line through point (-1 , -7):	b. Perpendicular to the line line through point (-1 , -7):
10. Table of a line: x | y 3 | -8 4 | -10 5 | -12 6 | -14	a. Parallel line through point (3 , 8):	b. Perpendicular to the line through point (3 , 8):
11. Graph of a line:  	a. Parallel line through point (2 , -9):	b. Perpendicular to the line through point (2 , -9):