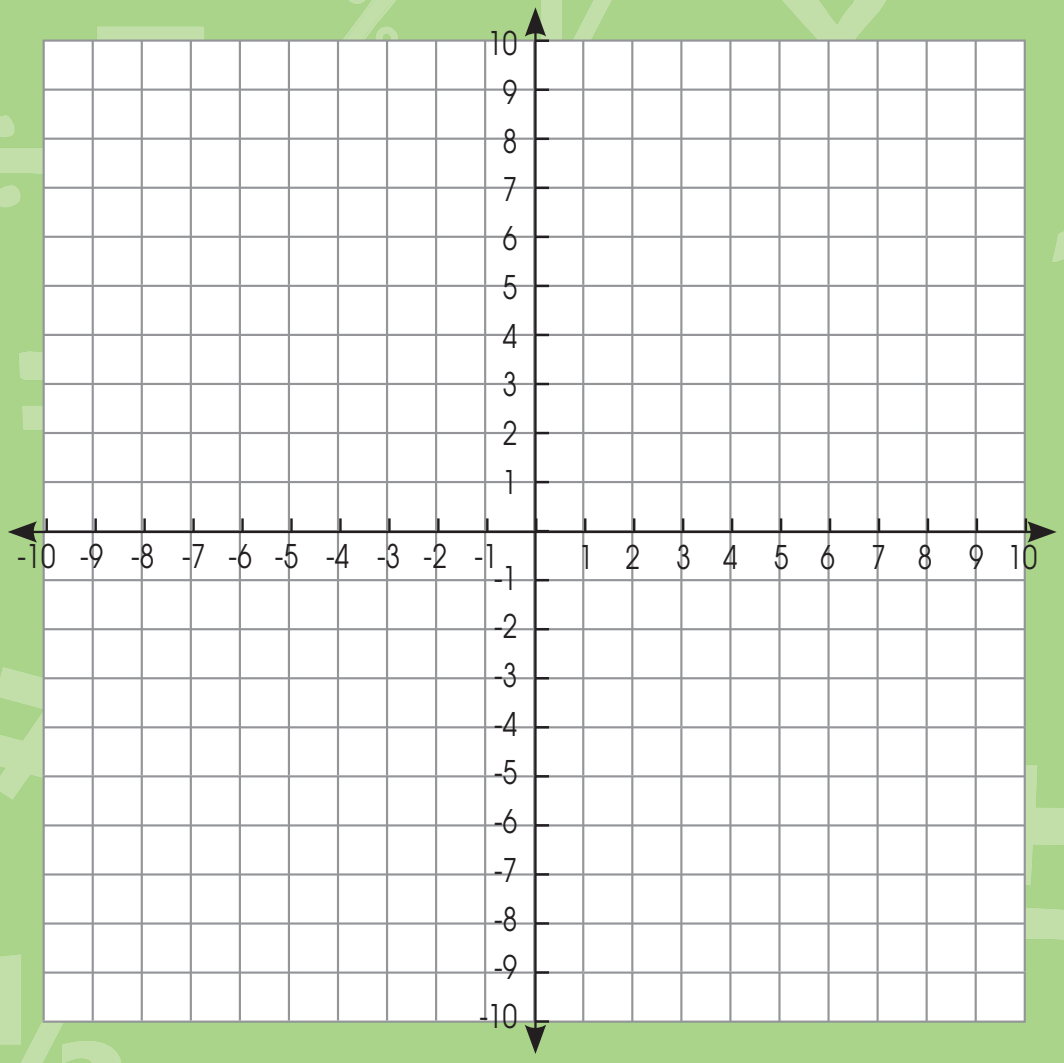
Tessellations

A tessellation is also known as tiling. A tessellation is made by a shape being repeated over and over again. The shapes fit together without any overlapping or gaps. A tessellation can also be made by repeating a design made by interlocking regular polygons. (Remember, a regular polygon has sides of the same length.)

Create a tessellation using pattern blocks. Trace around each block used to make the tessellation.

Coordinate System



Plot the following coordinates. Connect each dot in order.

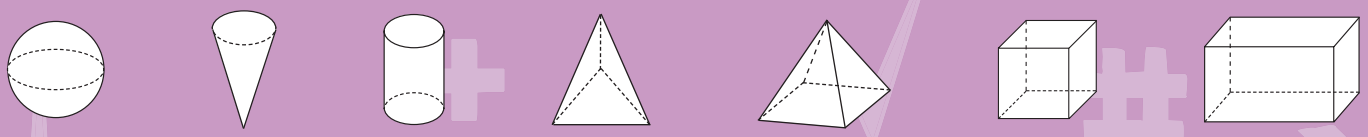
A	-2,2
B	0,9
C	2,2
D	9,2
E	4,-2

F	6,-9
G	0,-5
H	-6,-9
I	-4,-2
J	-9,2

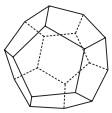
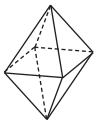
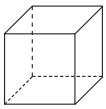
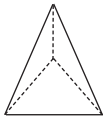
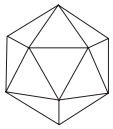
Polyhedrons and Platonic Solids

Poly **means "many" and** ***hedron*** **means "face". A polyhedron is a solid with only flat faces.**

Circle the solid shapes that are polyhedrons.

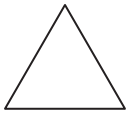
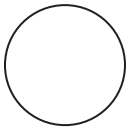
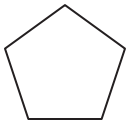
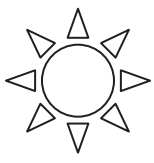


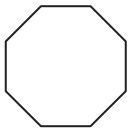
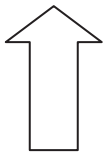
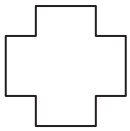
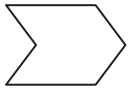
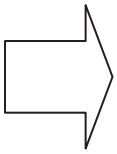
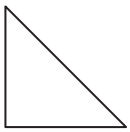
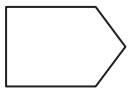
There are five platonic solids. To figure out if a shape is a platonic solid, add the number of faces(F) and vertices (V), and subtract the number of edges (E). If the answer is two, the figure is a platonic solid.
F + V - E = 2

Shape	Faces (F)	Vertices (V)	Edges (E)	F+V+E =	Is it a Platonic Solid?
Dodecahedron 					
Octahedron 					
Cube 					
Tetrahedron (Triangular Pyramid) 					
Icosahedron 					

Transformations

Transform each shape.

	Reflection	Translation
		
		
		
		
		
		
		

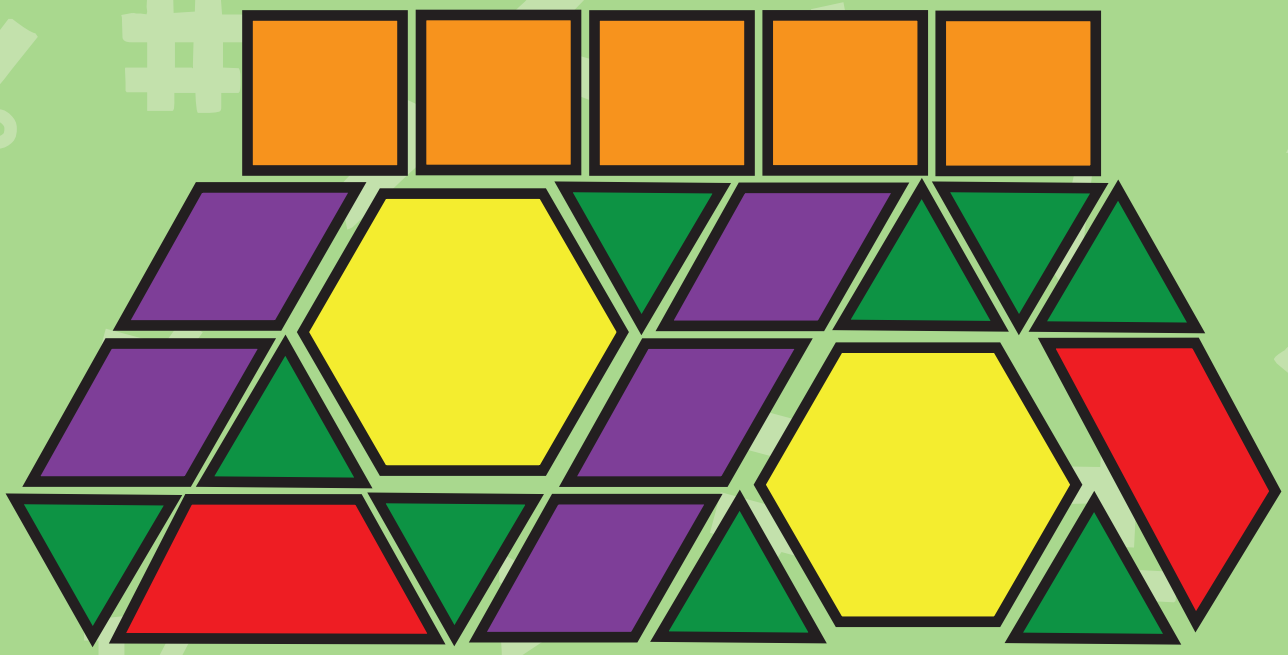
	Reflection	Translation
		
		
		
		
		
		
		

Pattern Blocks

a) Identify the different pattern block shapes seen in the design below by drawing or placing them beside their names. Write the number of times the shape is used.

Hexagon ___ Rhombus ___ Square ___

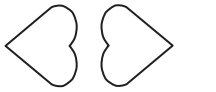
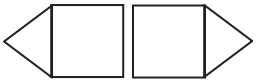
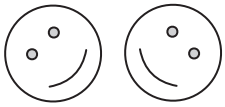
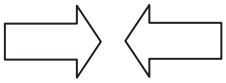
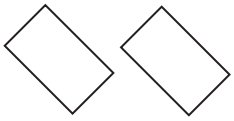
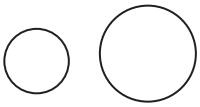
Trapezoid ___ Triangle ___



b) Cut out the different pattern blocks and arrange them on the mini poster. Using the same pattern blocks, arrange them into other shapes and designs.

Reflection, Rotation, Translation and Enlargement

Describe the transformation (reflection, rotation, translation, and enlargement) needed to make the first shape look like the second shape.

	Transformation
	
	
	
	
	
	
	
	

	Transformation