

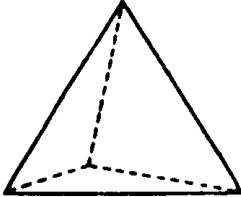
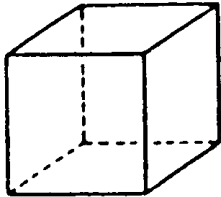
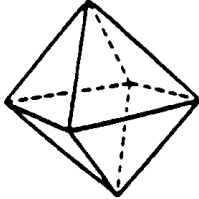
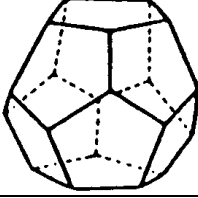
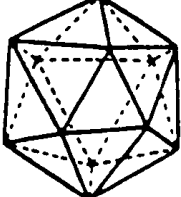
Name: _____

Date: _____

Period: _____

Platonic Solids Patterns

Count and record the number of faces (F), vertices (V), and edges (E) for each of the Platonic Solids. Then calculate the values for $F + V - E$. The Tetrahedron is already done.

Name	Figure	Faces (F)	Vertices (V)	Edges (E)	$F + V - E$
Tetrahedron		4	4	6	<u>$4 + 4 - 6 = 2$</u>
Hexahedron (cube)		_____	_____	_____	_____
Octahedron		_____	_____	_____	_____
Dodecahedron		_____	_____	_____	_____
Icosahedron		_____	_____	_____	_____

Answer these questions on the back side of this paper.

1. What pattern did you observe in the last column?
2. Determine whether or not this relationship holds with an ordinary box (rectangular prism).
3. Explore this relationship with another polyhedron that has faces, vertices, and edges but is not a rectangular prism or Platonic Solid.