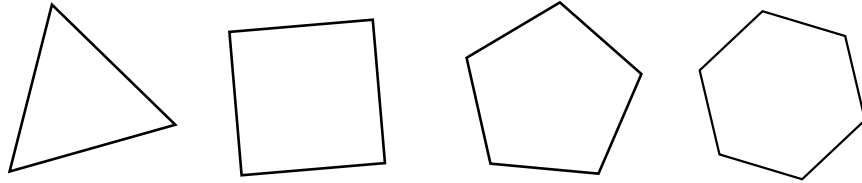


Ideas in Mathematics
Math 170, Spring 2016
Quiz 6



Above are illustrated several “regular” polygons, which means shapes all of whose angles and edge lengths are equal. These regular polygons have 3, 4, 5, and 6 edges each, but you can imagine constructing one for any number of edges. The set of regular polygons is infinite because there exists a regular polygon with n sides for every $n > 2$.

The figures below are called “regular” polyhedra because all of their faces are identical regular polygons. The first is called a (regular) tetrahedron, and is composed of 4 triangles; the second is called a cube, and is composed of 6 squares. Are there also an infinite number of regular polyhedra? If there is only a finite number of them, how many are there? What are they?

