

## EDITORIAL

Finding good, educational and engaging mathematical resources can be quite a feat: there is a lot of information on the Internet. Typing “polygon” into Google yields over 28 million results. Just on the first page of the search, I get links to a dictionary definition, a gaming website and YouTube channel, a climate control organization and a trading network for jewellers. Oh, and, thankfully, a wikipedia page on plane figures. So when you find a mathematical resource that is worthwhile, you share it.

My latest discovery is Mathigon. This interactive textbook offers units for students and teachers of grades 6 and above on geometry, algebra, discrete math, probability, statistics, logic, sets, infinity, and many more. Some are still under construction, but many are available now. The website is easy to navigate, the content is excellent and the exposition is compelling. The layout and interactive features are conducive to active reading, experimenting and questioning. It is beautifully done. I encourage you to take a look. Meanwhile, I'll be busy thinking about the ways to incorporate it into my classroom and outreach activities this fall.






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Mathigon

Polygons and Polyhedra

- Polygons
- Quadrilaterals
- Tessellations
- Polyhedra
- Platonic Solids
- More on Polyhedra
- Nets and Cross Sections

This means that there are just **???** Platonic solids! Let's have a look at all of them together:

Tetrahedron	Cube	Octahedron	Dodecahedron	Icosahedron
				
<b>???</b> Faces	<b>???</b> Faces	<b>???</b> Faces	<b>???</b> Faces	<b>???</b> Faces
<b>???</b> Vertices	<b>???</b> Vertices	<b>???</b> Vertices	20 Vertices	12 Vertices
<b>???</b> Edges	<b>???</b> Edges	<b>???</b> Edges	30 Edges	30 Edges

Notice how the number of faces and vertices are **???** for cube and octahedron, as well as dodecahedron and icosahedron, while the number of edges **???**. These pairs of Platonic solids are called **dual solids**.

We can turn a polyhedron into its dual, by “replacing” every **???** with a vertex, and every vertex with a face. These animations show how:

**are different**  
**stays the same**

