## 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.

$\square$

## Coordinate System



Plot the following coordinates. Connect each dot in order.

| $\mathbf{A}$ | $-2,2$ |
| :---: | :---: |
| $\mathbf{B}$ | 0,9 |
| $\mathbf{C}$ | 2,2 |
| $\mathbf{D}$ | 9,2 |
| $\mathbf{E}$ | $4,-2$ |


| $\mathbf{F}$ | $6,-9$ |
| :---: | :---: |
| $\mathbf{G}$ | $0,-5$ |
| $\mathbf{H}$ | $-6,-9$ |
| $\mathbf{I}$ | $-4,-2$ |
| $\mathbf{J}$ | $-9,2$ |

## Polyhedrons and Platonic Solids <br> - •••• •••••• ••••

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 ( $\mathbf{E}$ ). If the answer is two, the figure is a platonic solid.
$\mathbf{F}+\mathbf{V}-\mathbf{E}=\mathbf{2}$

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

