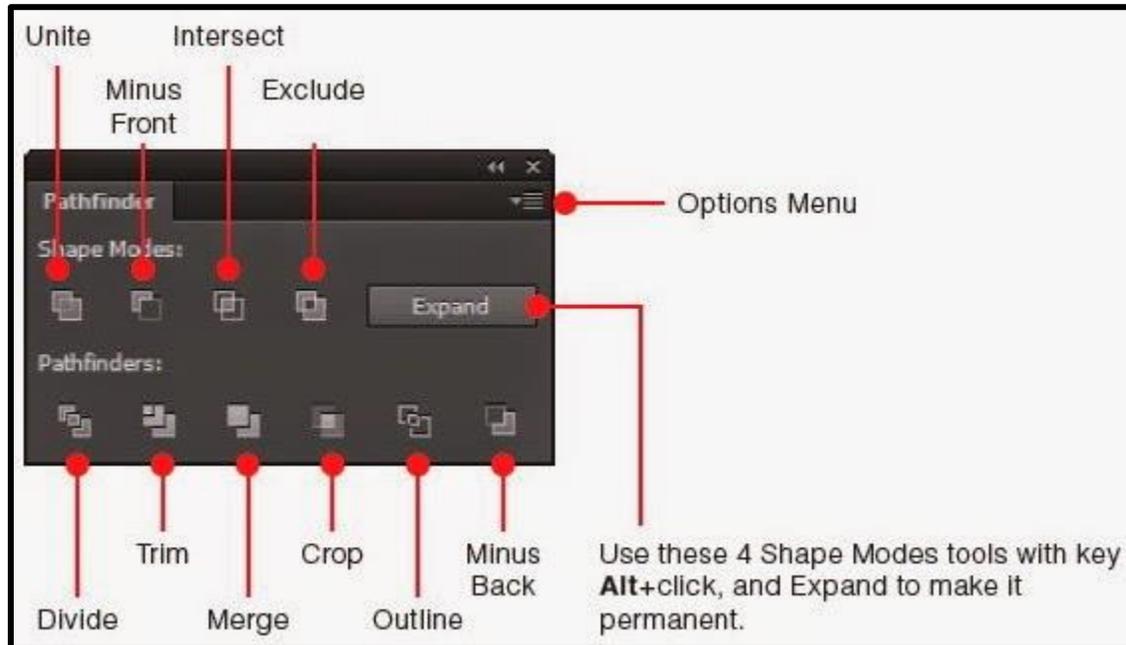# Adobe Illustrator's Pathfinder

Adobe Illustrator's Pathfinder panel is one of the most beneficial in the entire program. You can create custom shapes and paths by using the versatile Shape Modes and Pathfinders within the panel.

To access the Pathfinder panel:
Navigate to Window > Pathfinder in Illustrator to bring up the Pathfinder panel.

Shape Modes
Shape Modes alter the final shape by uniting, excluding, intersecting, or eliminating separate layers. These actions create new and unique polygons of a single color.

❖ **Unite**
The Unite action combines two or more shapes into one cohesive polygon. This tool is ideal for building complex vector shapes and joining them together.
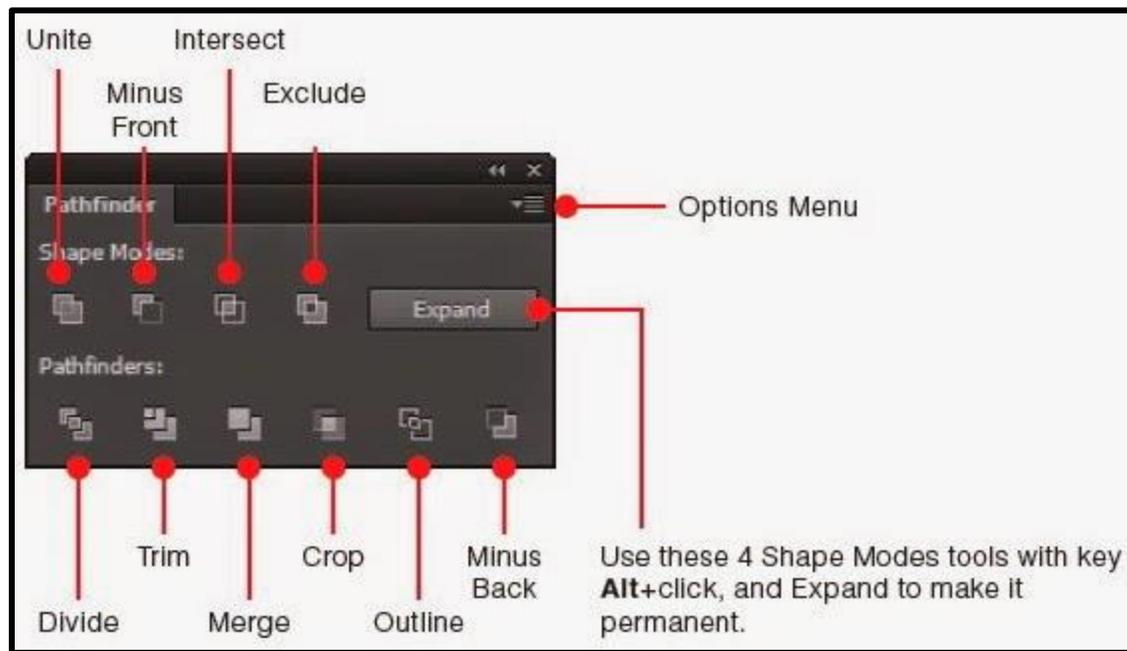
❖ **Minus Front**
The Minus Front shape mode eliminates the top shape layers and any overlaps, leaving behind the bottom shape and color.

❖ **Intersect**
Intersect actions create a new shape by revealing the overlapped area and removing the top and bottom shape layers.

❖ **Exclude**
The Exclude shape mode eliminates the overlapping area and leaves behind the remaining polygons to create a complex shape.

Pathfinders

Pathfinder commands alter existing paths, shown by line segments; these actions don't typically form new shapes, but rather break the existing compound shapes into distinct paths.

- ❖ **Divide**
  The Divide pathfinder breaks up the existing shapes into top, overlap, and bottom layers to create three distinct paths.
- ❖ **Trim**
  Trim pathfinders cut away the top shape layer from the revealing bottom layer. This is similar to taking scissors to multiple shapes glued together and trimming around the edges of each overlapping polygon.
- ❖ **Merge**
  The Merge pathfinder is similar to that of the Trim command when applied to two multicolored shapes.
  When applied to three shapes, two of them being the same hue, the Merge action joins the two yellow shapes and trims the outline of the other blue polygon.
- ❖ **Crop**
  This command crops the existing shapes and leaves behind the overlapping area along with the shape path of the top layer, like the outline of the circle above.
- ❖ **Outline**
  Just as the name mentions, the Outline pathfinder creates an outline of the shapes selected. These outlines can then be individually selected with the Selection Tool (V) when ungrouped with Shift+Command+G.
- ❖ **Minus Back**
  The Minus Back is opposite of the Minus Front command; it removes the bottom shape layer and its overlap, revealing the top layer of the circle.