

## Rhino Training - Research Computing Services

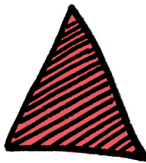
| Command             | Shortcut     | Result   | Learning Objective |
|---------------------|--------------|--|--------------------|
| -                   | Left Click   | Select, click and drag to select multiple  | navigation         |
| -                   | Right Click  | Pan around centre mass; repeat last command, ""enter"  |                    |
| -                   | Ctrl + Shift | Select individual face or part   |                    |
| ZE                  | -            | Zoom Extent: Centre rotation around all objects  |                    |
| ZS                  | -            | Zoom Selected: Centres rotation around selected object   |                    |
| Move                | -            | Move surface from a selected point   |                    |
| -                   | Enter        | Repeat last command; progress command line   | selecting shapes   |
| -                   | Spacebar     | Repeat last command; progress command line   |                    |
| Group               | Ctrl + G     | Group parts together without joining   |                    |
| Ungroup             | -            | Remove group status  |                    |
| BooleanDifference   | -            | Removing the shape of one object from the mass of another, Tinkercad void functions                                      | trimming shapes    |
| BooleanIntersection | -            | Two overlapping objects are removed, leaving the overlapping section behind  |                    |
| BooleanUnion        | -            | Joins two polysurfaces together, removing any overlap and forming a closed surface                                       |                    |
| Cap                 | -            | Fills in a simple hole within a surface; usually needs to be planar (flat)   | drawing shapes     |
| Curve               | -            | Draw a curve through a series of points  |                    |
| ExtrudeCrv          | -            | Extrudes the shape of a curve in one or both directions  |                    |
| ExtrudeSrf          | -            | Extrudes a surface in one or both directions   |                    |
| Join                | Ctrl + J     | Join touching components into a surface  |                    |
| Loft                | -            | Connect multiple lines, or curves through a single approximated surface  |                    |
| Mirror              | -            | Symmetrical copy from a set point  |                    |
| Offset              | -            | Copies a curve to an adjacent angle at a set distance  |                    |
| OffsetSrf           | -            | Adds thickness to an object by creating a larger copy around it, keeping the same proportions, but adding a second skin. |                    |
| Planarsrf           | -            | Fills a curve with a solid surface   |                    |
| Polyline            | -            | Draw a connected series of straight lines  |                    |

## definitions

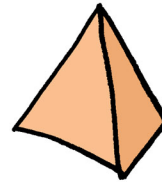
|                       |   |
|-----------------------|---|
| <b>Curve</b>          | Refers to lines. Any drawn lines, any drawn shapes closed or open     |
| <b>Planar surface</b> | A single face that is solid or filled.                                |
| <b>Poly surface</b>   | A collection of planar surfaces                                       |
| <b>Boolean</b>        | The term for intersecting shapes and how the intersection is handled. |



curve



PLANAR  
SURFACE



POLY  
SURFACE