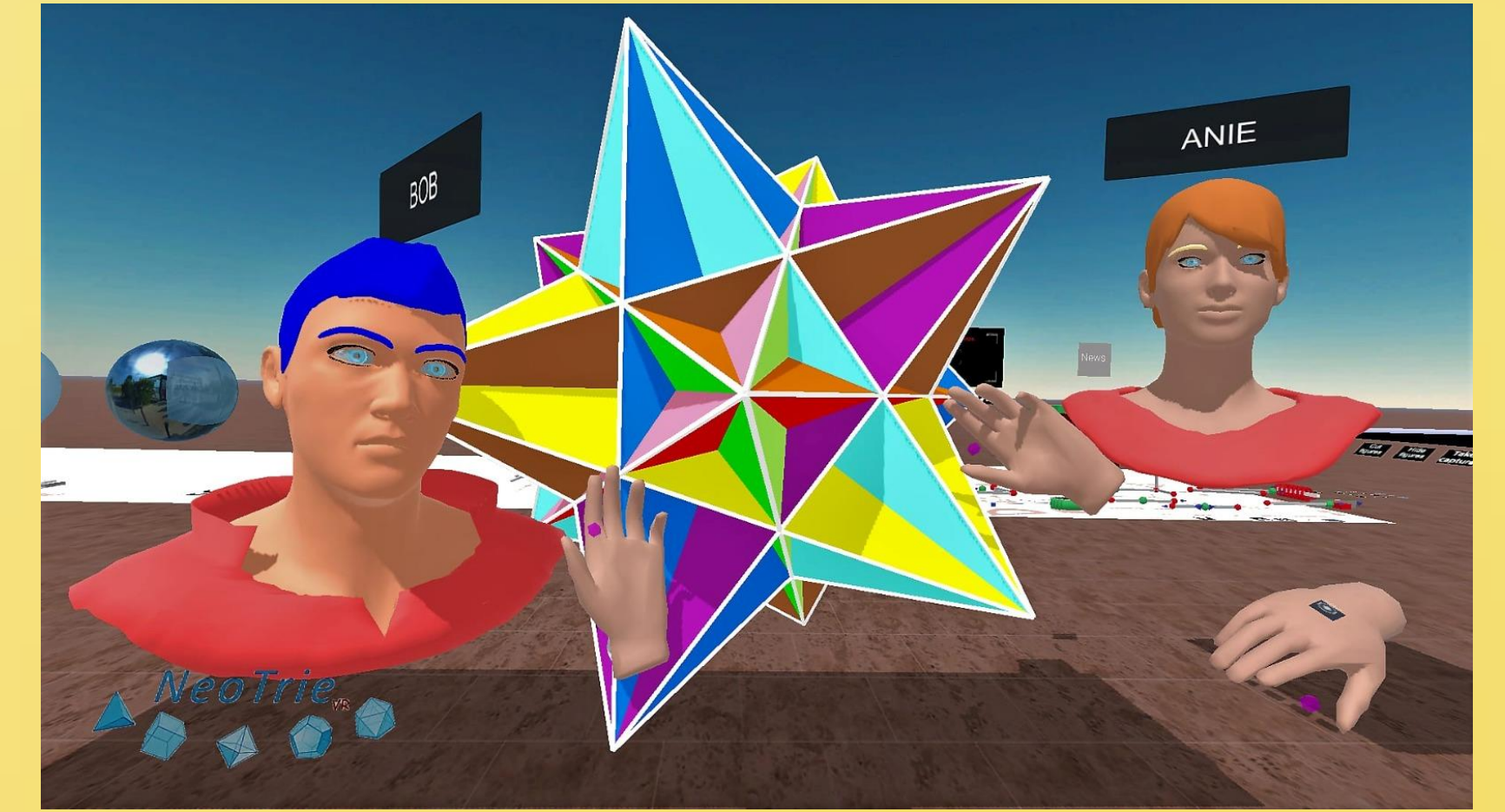


GEOMETRICIAN'S VIEWS

TOPIC: NEOTRIE VR

Neotrie VR is a multiplayer dynamic geometry software of virtual reality which enables students to create, manipulate and interact with 3d geometrical objects.



Hand actions

Create vertices and edges: Press the Trigger Button to create vertices at the Pink Dot Pointer. To create an edge between two vertices press the Trigger Button on one vertex and then, the second vertex.

Faces: Select 3 or more vertices to create a face by selecting the boundary edges keeping the Trigger Button pressed.

Edit: Press the Trigger Button on a vertex, edge or face, and keep it pressed to move it.

Erase: Click over the vertice, edge, face or any single element that you want to delete.

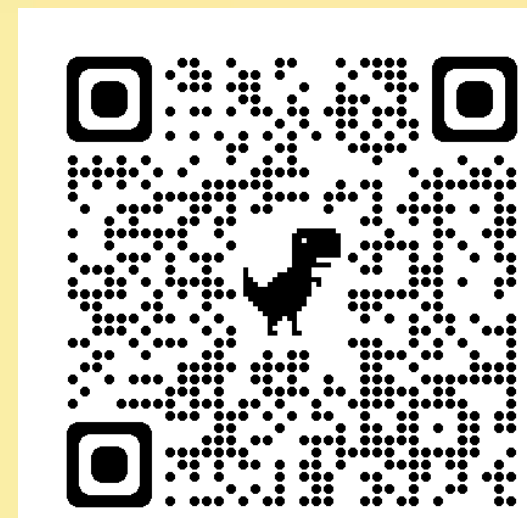
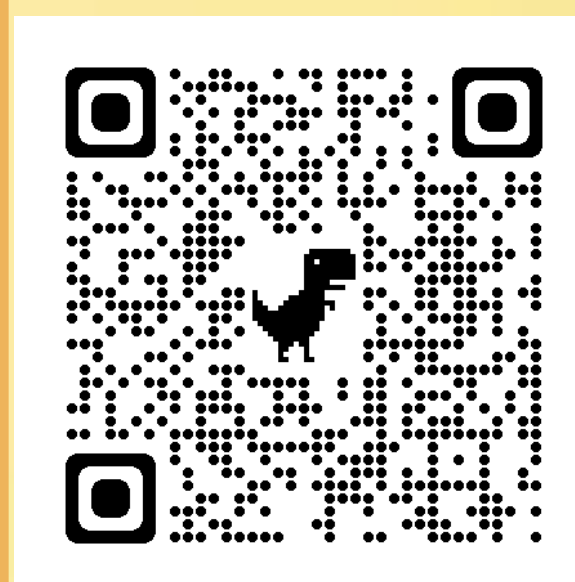
Move: Move a figure. Having this transform action on both hands, allows you to resize the complete figure.

Grab: Rotate a figure.

Scale: Use the move/grab on both hands to scale.

Draw: Use this action to create free drawings, by keeping pressed the Trigger Button.

Extrude to build prisms and pyramids from any face.



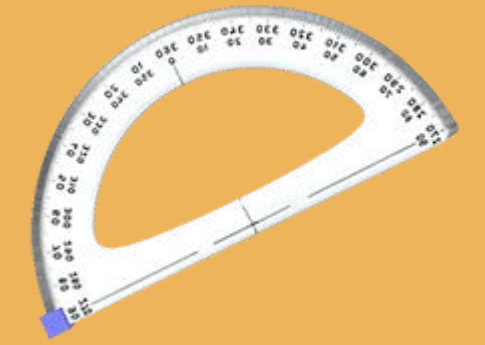
Geometrical Dynamic Tools



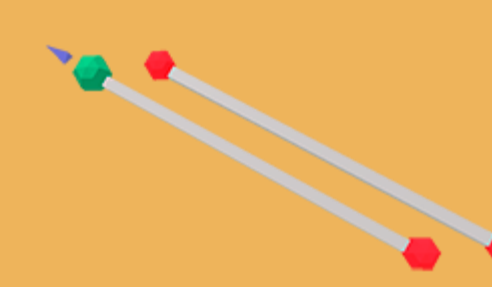
Colour the elements of a figure



Measure distance between two vertices



Measure angles between edges or faces



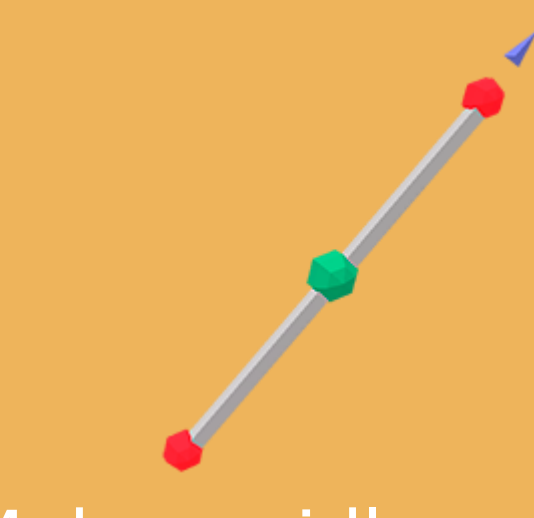
Makes parallels and translated copies



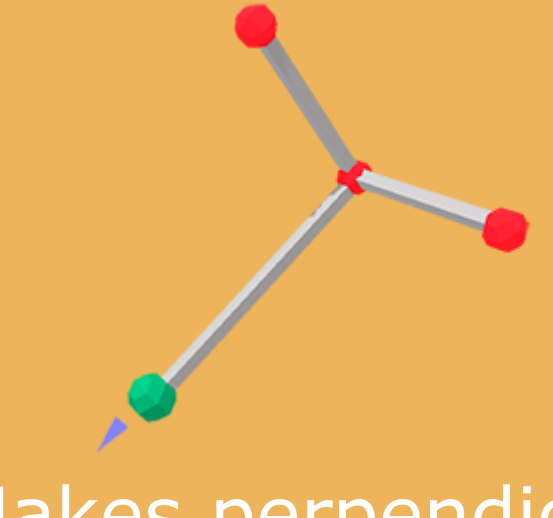
Makes central, axial or planar reflexions



Rotate a figure or make rotated copies



Makes middle point of two vertices, edge or face



Makes perpendicular point of two edges, perpendicular plane



Copy a figure for tiling

First activities:

1. Build a polygon convex or non convex or with the shape of a star, and extrude it to get a prism or pyramid. Use the pencil to paint differently the vertices, edges and faces of a prism. Count them and check the Euler formula (Euler's characteristics = 2). Compare with the info given automatically.
2. Download a cube from the gallery of figures or press the button "Platonic solids" from the virtual keyboard. Use the reflection and rotation tool to transform the cube and see their rotational and planar symmetries. Draw the planes of symmetries of the cube.
3. Use the middle point tool to get the dual, an octahedron, try with other Platonic solids by touching only one vertex.
4. (Advanced player) Use the parallel tool to build a frieze, tiling or 3d tiling of a small figure. Use the reflection tool to get central, axial or planar reflected copies. Use the rotation tool to get rotated copies with a given angle.

