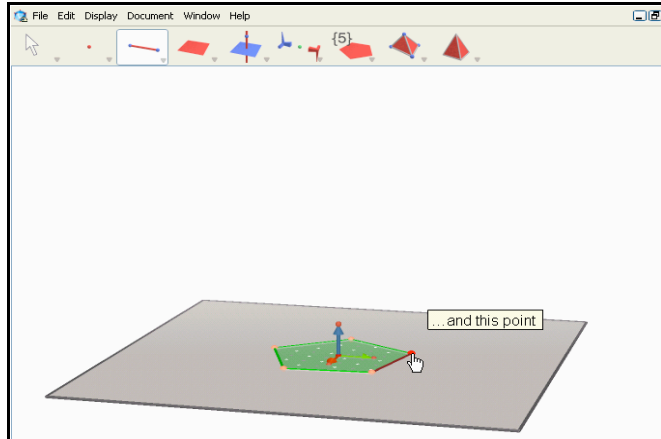


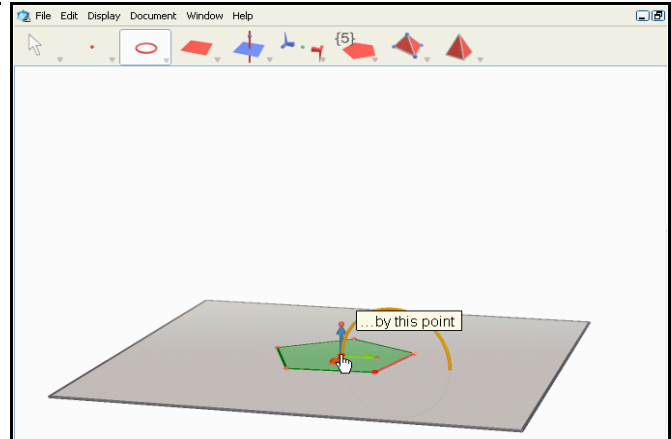
Start by creating on the **base plane**, a regular pentagon whose axis is the blue vertical vector. Activate the **Regular Pentagon** tool, select the blue vector and click on the base plane for creating one vertex of the pentagon.

1



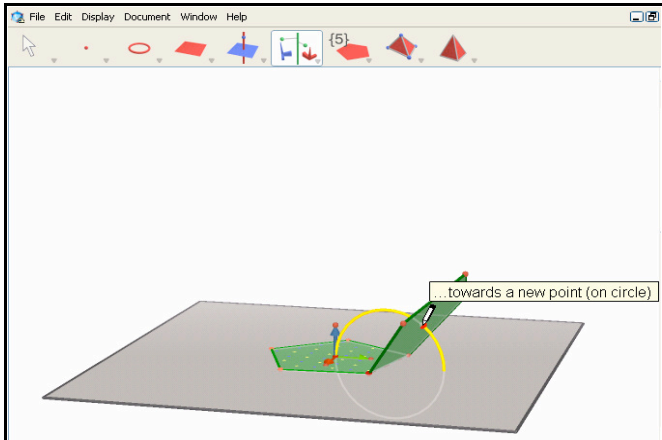
By using the **Segment** tool, construct a segment that joins two consecutives vertices of the pentagon.

2



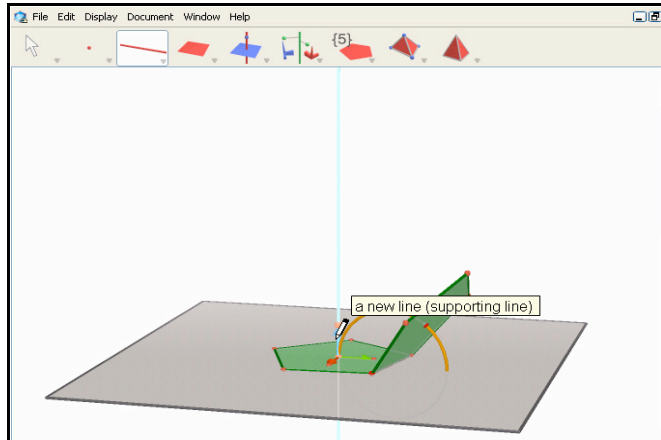
The **Circle** tool enables to create a circle defined by an axis and a radius point. Select the segment created in last step and the center of the pentagon.

3



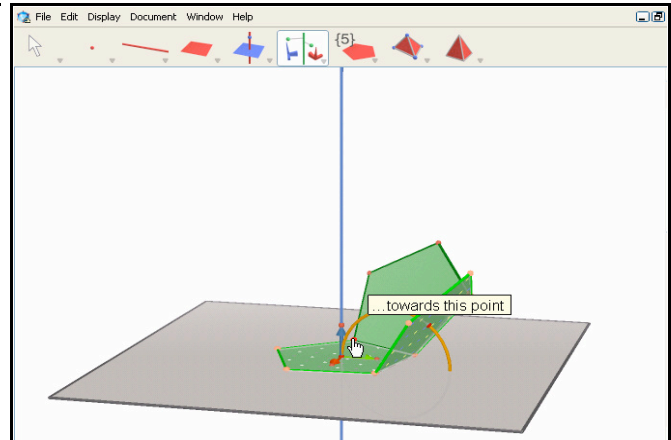
For constructing another dodecahedron face, use the **Rotation** tool. Select the pentagon, the segment and the pentagon center and click on the circle. The new pentagon turns around the segment when the point is moved along the circle.

4



Activate the **Line** tool and select the blue vector. The created line will be used as axis of rotation for the next steps.

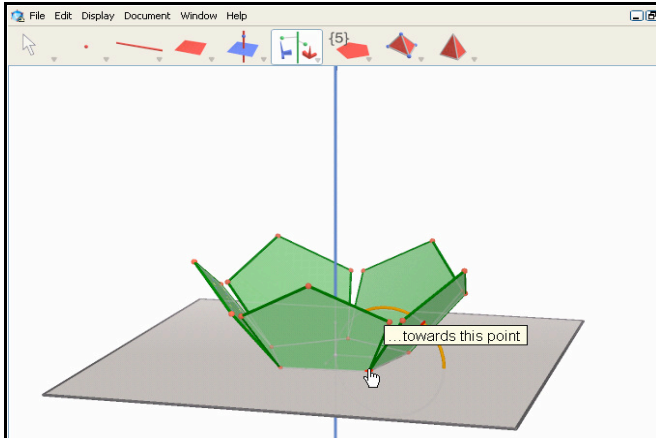
5



The third pentagon is the image of the second one by a rotation around the line. First select the line, then the second pentagon, and two consecutives vertices of the first one. Make sure of doing a counterclockwise selection.

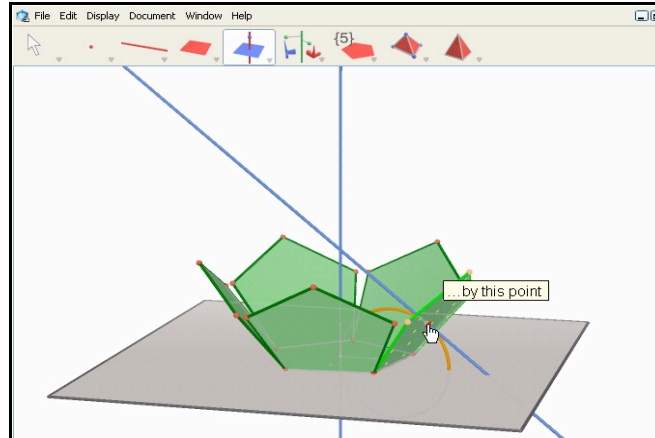
6

Construction of an articulated dodecahedron (i.e. one that folds and unfolds)



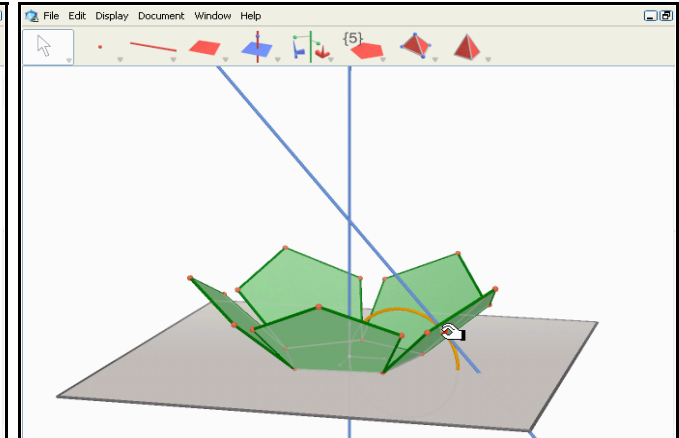
The rest of the lateral pentagons are the result of similar rotations. Each new pentagon is obtained from the closest pentagon by a rotation around the line.

7



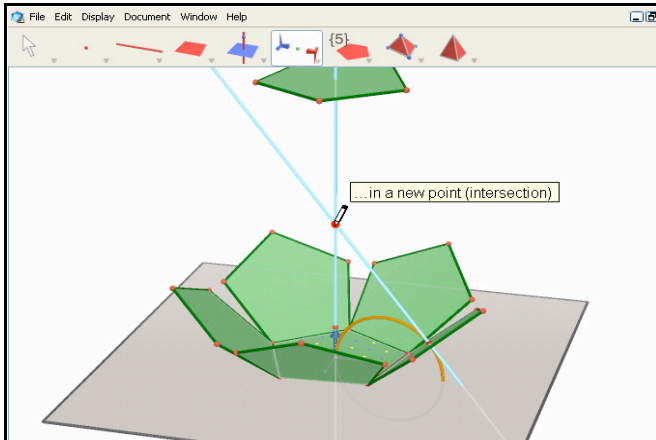
With the **Perpendicular** tool construct a perpendicular line to the second pentagon that passes through its center.

8



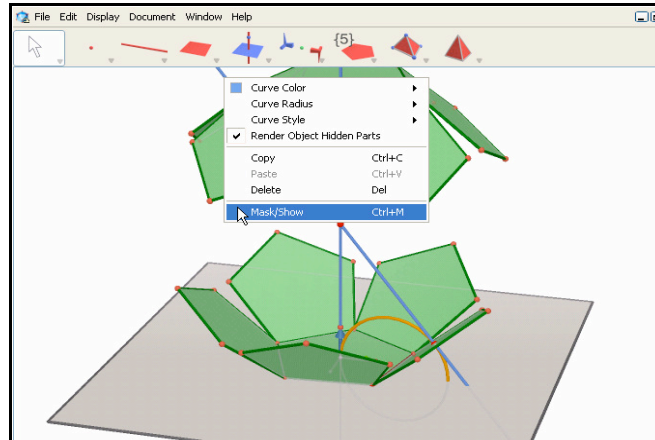
Holding a right-click and dragging, the figure can be seen from any angle. Move the point on the circle in order to fold and unfold the articulated dodecahedron.

9



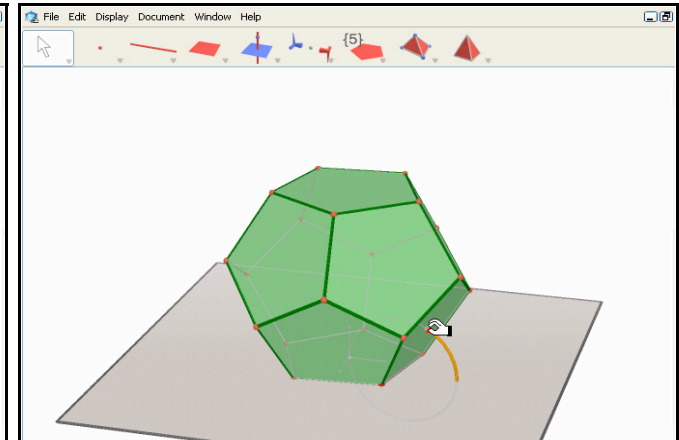
The top part of the dodecahedron will be constructed by a central symmetry. Activate the **Central Symmetry** tool, select the first pentagon, then the intersection point of the two lines.

10



The rest of the pentagons are obtained by similar central symmetries. They are placed diametrically opposite their counterparts. As the lines are now useless, they are hidden by right-clicking and selecting the **Mask/Show** item.

11



Moving the free point on the circle, you can find the position where the two parts join. By moving forward the point, you can observe the great dodecahedron.

12