Reference Features

The reasons you may need Reference features

- To locate a sketch for a new feature where a model surface is not available; *construct a reference plane to sketch*.

- To establish a plane or an edge for dimensioning; construct *reference plane or reference axis*.

- To provide a point for rotating or an axis for revolving features or patterns; *construct reference point or reference axis*.

- To establish an intermediate position that is required to define other reference plane; *construct a reference plane*.
Creating reference (Datum) planes

Right click in the menu area and select Reference Geometry

Reference point
Reference axis
Reference plane
Reference Plane

Reference plane is a rectangular plane that is tied to the model parametrically and is infinitely large. There is no limit on the number of reference planes and they can be used to create new sketches for feature operations.
Select three points to create a reference plane. The plane is passing through the three points.
Specify two lines to construct the plane.
Parallel plane with a specified offset (20 mm)

Select a face and specify the offset.

Perpendicular to a plane and thru a selected line.
Reference plane at a specified angle with respect to another plane

Reference plane tangent to a curve at a specified point

Ken Youssefi
Cut an object at a desired location (point A) with a specified angle

Select the top plane as a sketch plane and locate point A. Pass a line thru point A.

Create a reference plane (cutting plane) by selecting the top surface and the line passing thru A.
Select cutting tool (plane) and cut part (cylinder). Choose the section to consume.