

COMPUTER-AIDED DESIGN

CAD Illustration
Techniques

USE OF POLYGONS IN THE PRODUCTION OF 3D GRAPHICS

- Polygons are used in computer graphics to compose images that are three-dimensional in appearance.
- The object is split into lots of polygons which are sometimes but not always triangular.
- This is quicker to display than a shaded model.
- It also allows for texture mapping to be placed on the polygons to give a more realistic looking surface.
- The advantage is that polygons provide faster rendering for animation

Boolean functions of **add**, **subtract** and **intersect**, **slice**: Sketch and annotate simple graphics which explain these Boolean operations

BOOLEAN FUNCTION: ADD

- Add allows the user to combine the total volume of two or more solids or two or more regions into a composite object.

BOOLEAN FUNCTION: SUBTRACT

- Subtract allows the user to remove one volume of two solids or one of two or more regions into a composite objects.

BOOLEAN FUNCTION: INTERSECTION

- Intersect allows the user to create a composite solid from the common volume of two or more overlapping solids. INTERSCT removes the non-overlapping portions and creates a composite solid from the common volume.

BOOLEAN FUNCTION: SLICE

- Slice allows for a solid model to be clipped along a work plane to show a sectional view in the modelling mode using the sketch plane.
- This can allow for you to utilise project geometry of parts that can't be seen normally.