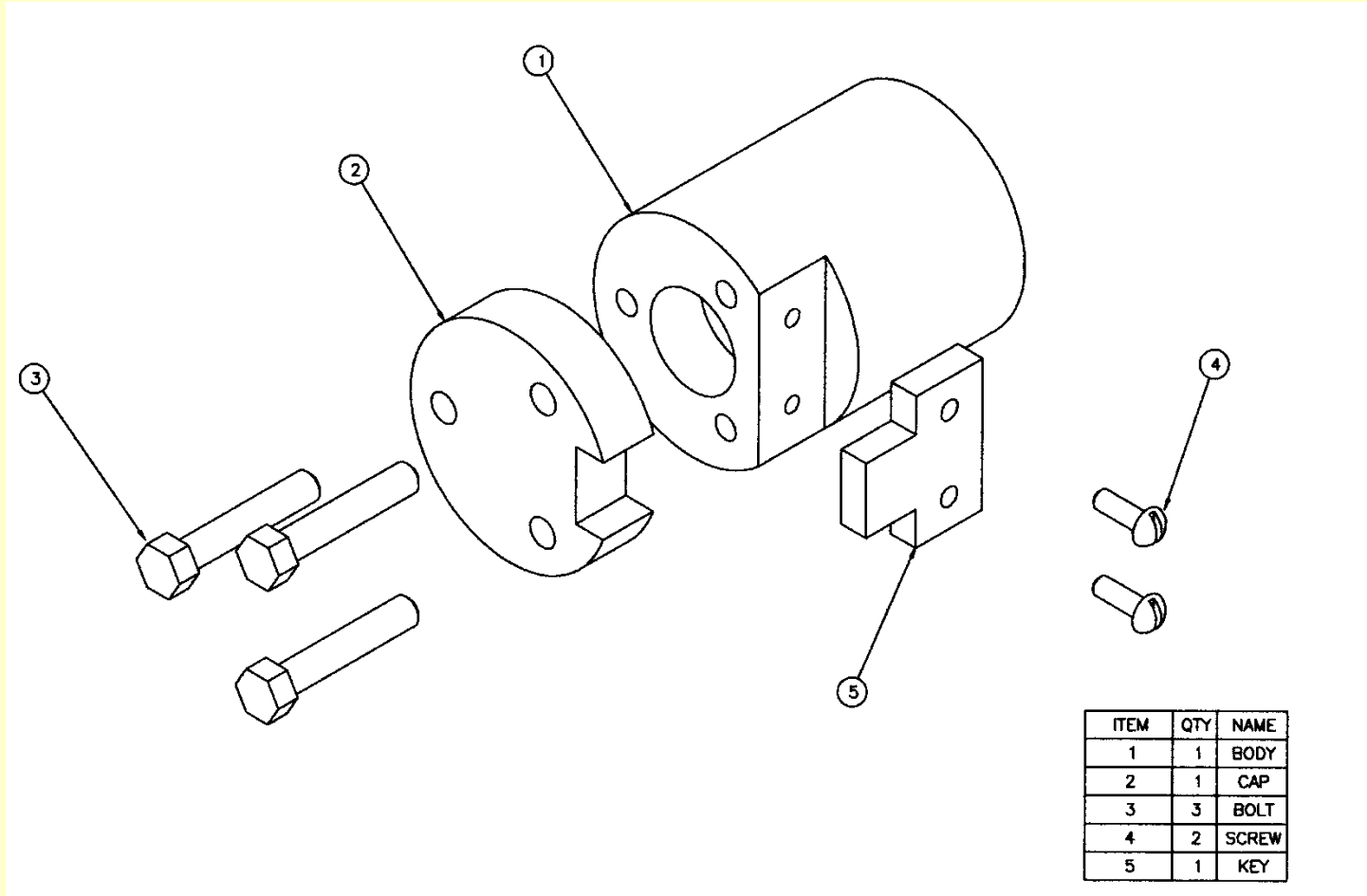


Sketching Isometric Pictorials

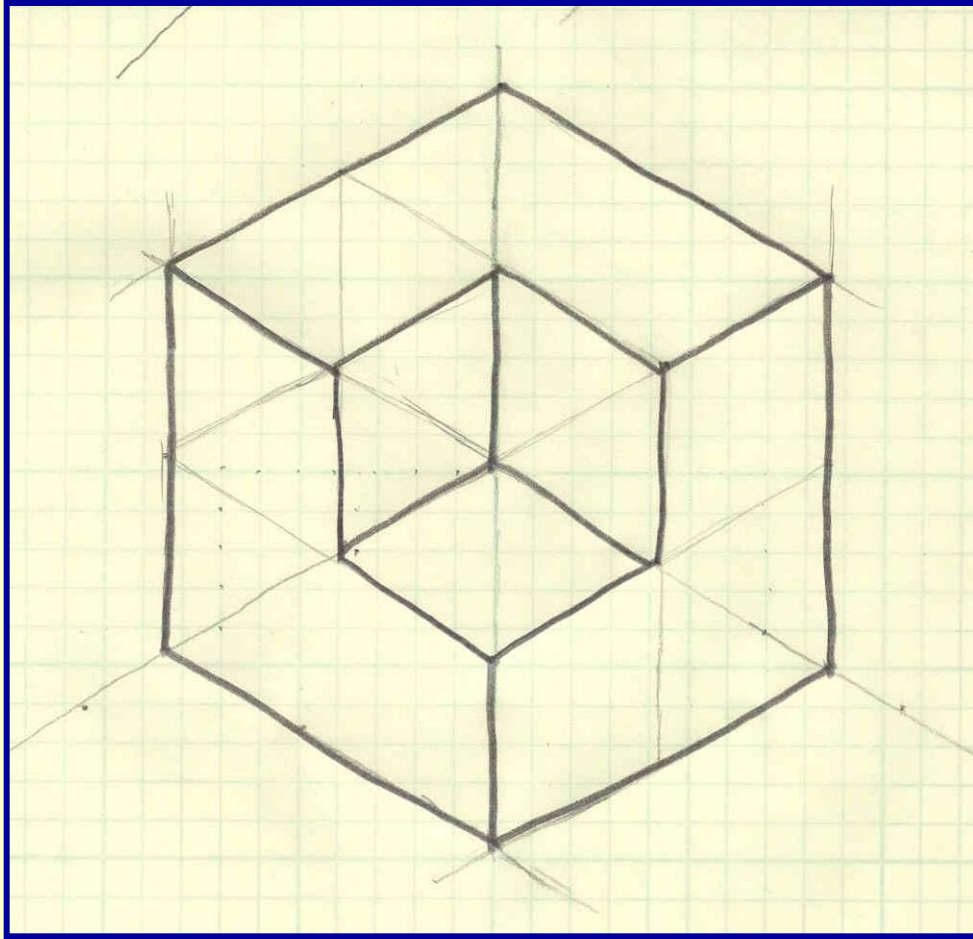
- **Axes for Isometric Pictorials**
- **Producing Isometric Pictorials**
- **Isometric Ellipses and Cylinders**



Isometric Exploded Assembly



Isometric Pictorial Characteristics?



Axes

Containment Block

Construction Lines

Visible Lines

Parallels

No True Shape

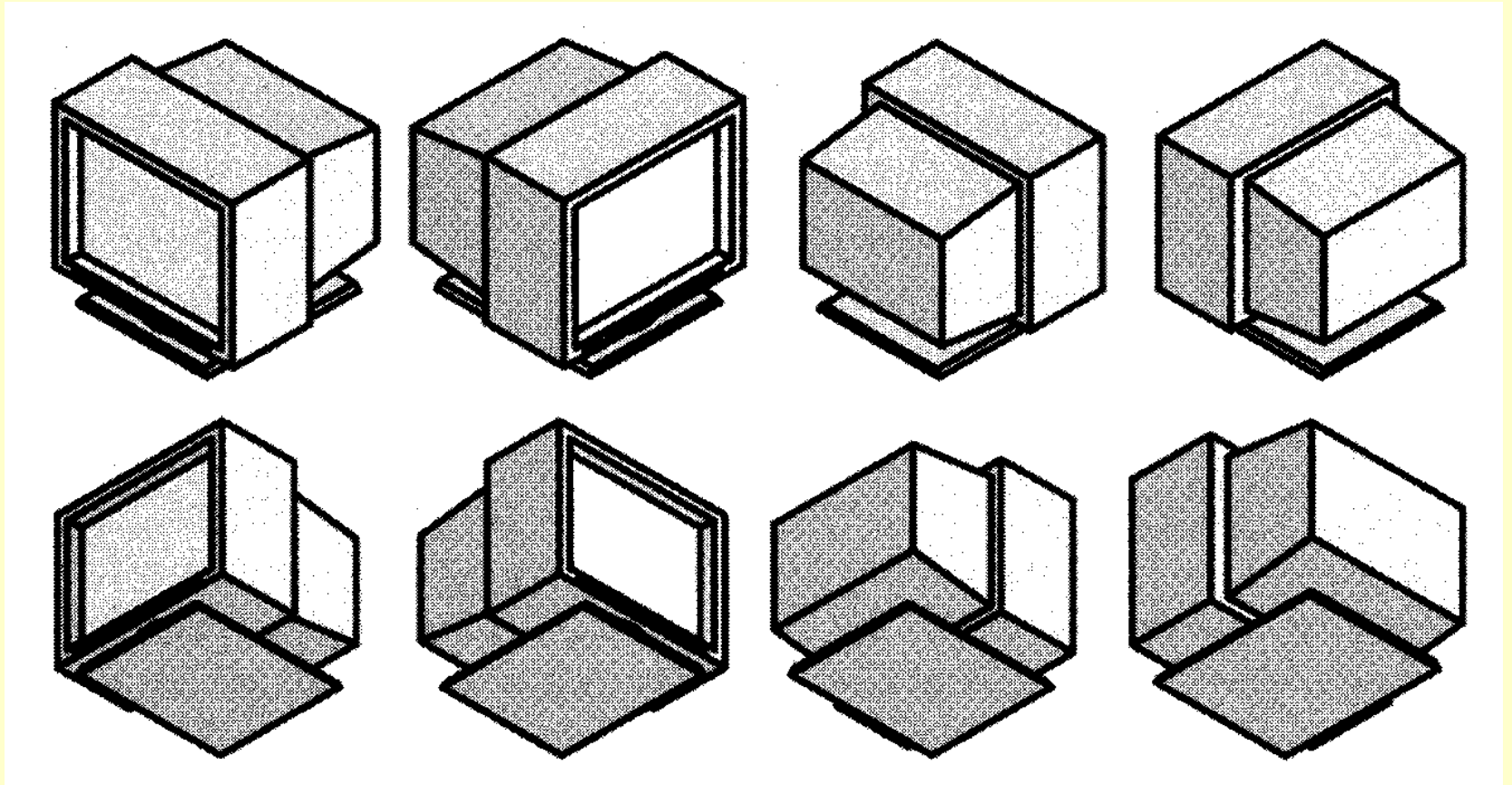
Proportions

Back Side

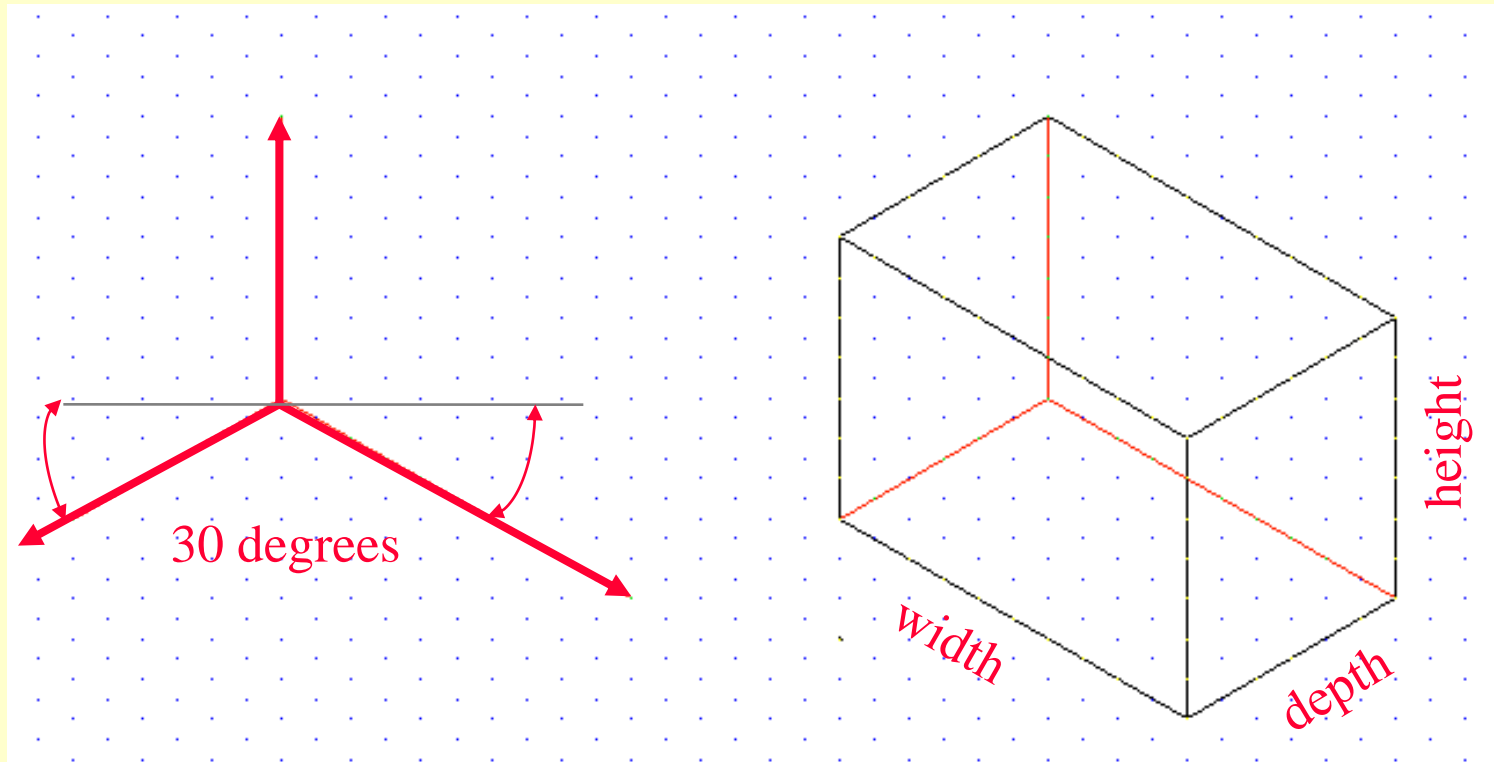
Isometric Pictorials present a more realistic representation of 3D objects than oblique pictorials.



Isometric Views



Isometric Axes

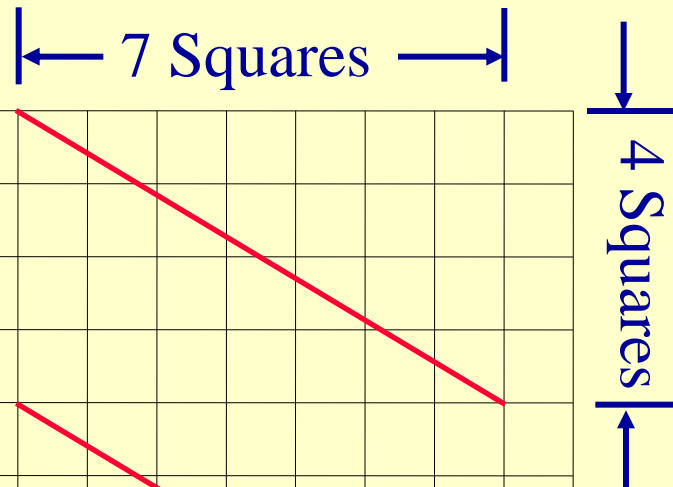


Principal planes are not parallel to the sketch plane.



7 by 4 Rule for Sketching Isometric Pictorials

Keeps Lines Parallel at Approx. 30 Degrees

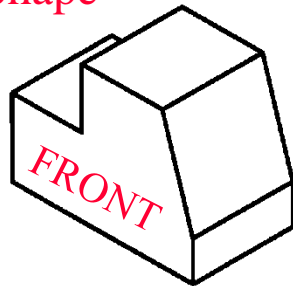


$$\tan^{-1} (4/7) = ?$$

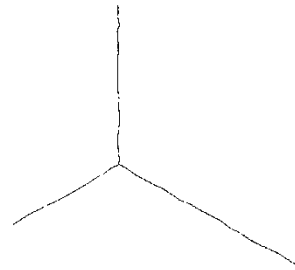


Steps to Produce Isometric Pictorials

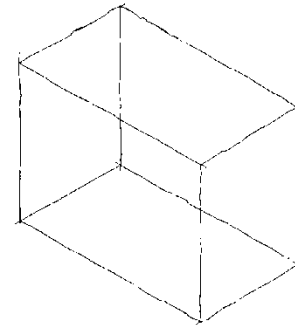
Characteristic
Shape



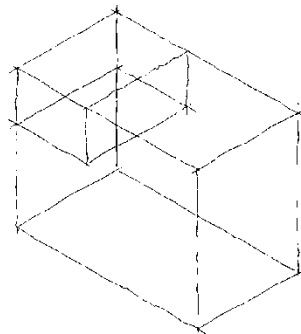
(a) SELECT VIEW



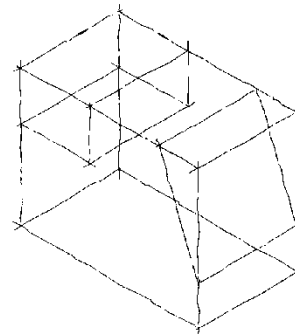
(b) SKETCH AXES



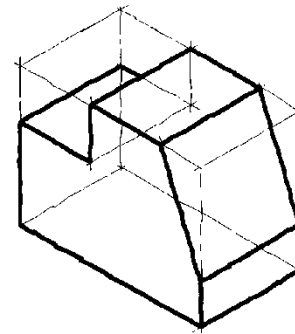
(c) COMPLETE BOX



(d) SKETCH BOUNDING
PARALLEL SURFACES

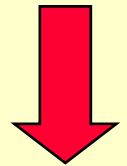


(e) SKETCH BOUNDING
SLANTED SURFACES



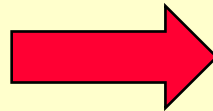
(f) DARKEN FINAL
PICTORIAL

Scale



Transfer
units

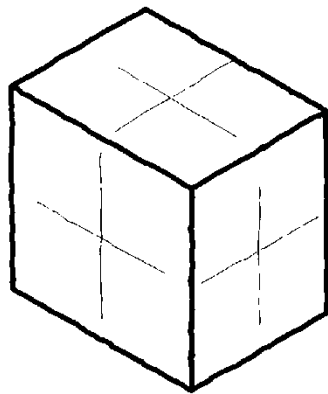
Parallel Lines



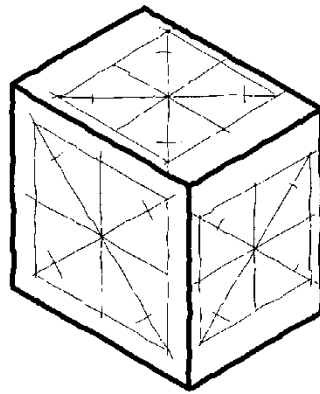
remain parallel



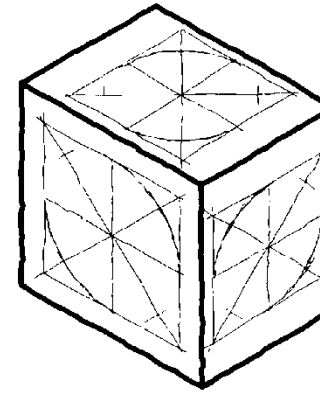
Isometric Ellipses



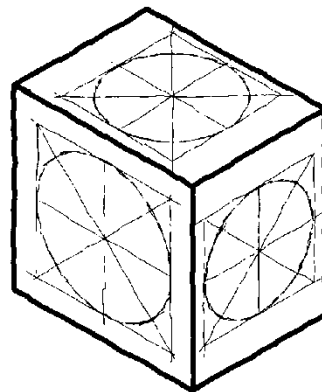
(a) SKETCH PLUSES



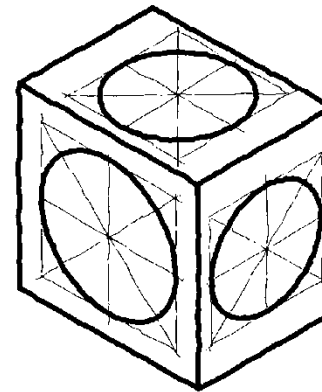
(b) MARK DIAGONALS



(c) START ELLIPSES



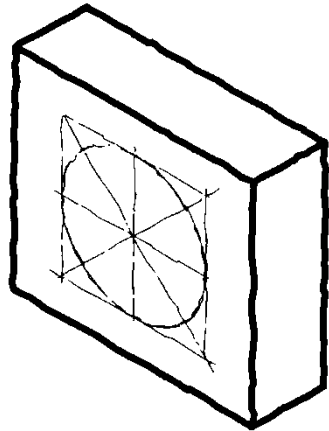
(d) COMPLETE ELLIPSES



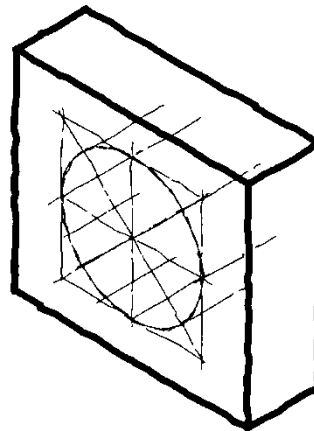
(e) DARKEN ELLIPSES



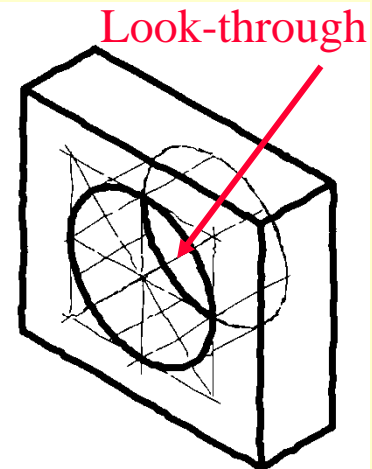
Isometric Cylinders and Holes



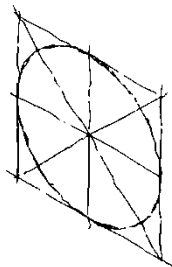
(a) SKETCH ELLIPSE



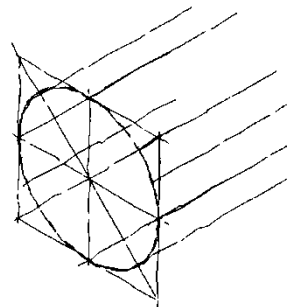
(b) SKETCH DEPTH LINES



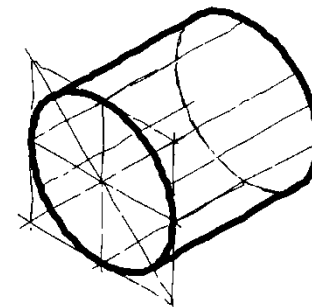
(c) FINISH HOLE



(d) SKETCH ELLIPSE



(d) SKETCH DEPTH LINES



(e) FINISH CYLINDER

