

ideal Drafting deals with the generation of graphical image or picture using computer. Graphical images are generated through computer programs using Mathematical method. The pictures are displayed in monitor screen and can be edited in an interactive manner and it is referred as interactive computer graphics.

### To Use Auto cad Commands :-

① To Use the mouse :- Mouse is a point picking device. It has three buttons. The left button is the pick button used to specify points on screen. The right button is equivalent to ENTER in the keyboard. The middle button usually display the object snap menu.

② To Use the keyboard :- The following special keys are commonly used in Auto cad.

F1 = Auto cad help

F3 = object snap on/off

F8 = ortho on/off

F9 = Snap on/off

ESC = Cancel current command

### Coordinates system in Auto cad :-

There are four coordinate system used in Auto cad to locate a point on the screen. In Auto cad, 2D drafting is done by considering the screen as the XY plane. i.e X values are considering horizontally and Y values are taken vertical. The left lower corner on the screen is considered as the origin (0,0).

(i) Absolute Coordinates

(ii) Relative Coordinates

(iii) Polar Coordinates (iv) Cartesian coordinate

(v) Absolute coordinates :- In this method, the points are located to draw a line with respect to the origin (0,0). To mark a point, value is given in pairs for X-coordinate value followed by Y-coordinate. Considering the following example to generate the

given drawing.

Command

LINE

PRESS ENTER Key or

PRESS ENTER

Specify first point 20, 20

Specify next point (undo) 80, 20

" 80, 50

" 40, 50

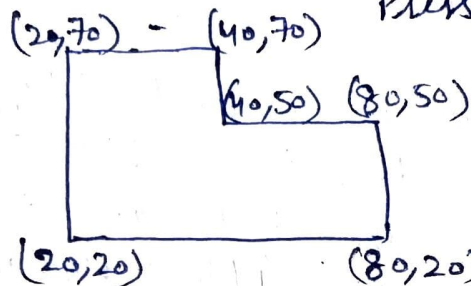
" 40, 70

" 20, 70

" 20, 20

"

PRESS ENTER to complete the drawing



- ② Relative Coordinates :- In this method, the points are located to draw a line with reference to the ~~prev~~ previous point. Consider following example

Command

Line

Specify the first point 20, 20

Specify the next point @ 60, 0

" @ 0, 30

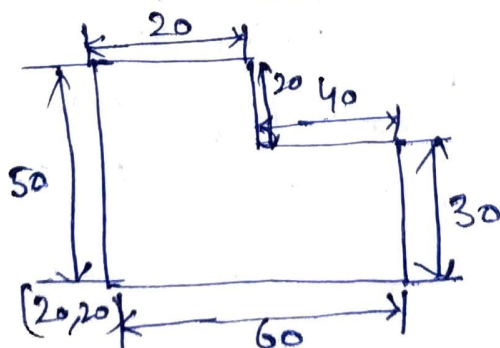
" @ -40, 0

" @ 0, 20

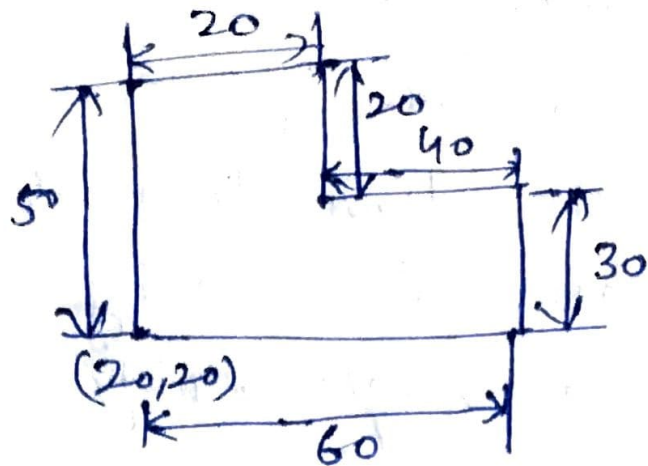
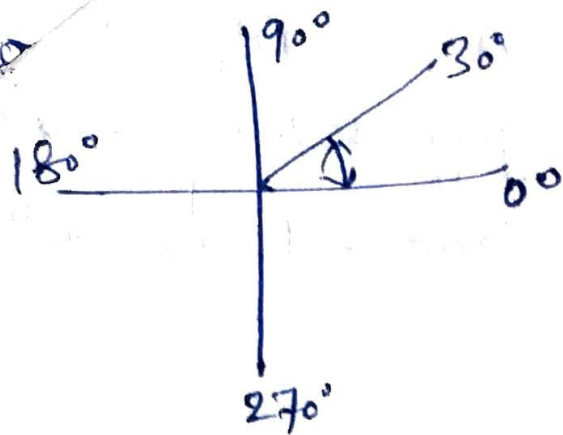
" @ -20, 0

" @ 0, -50

" PRESS ENTER to complete the drawing



- ③ Polar Coordinates :- In this method, the points are located to draw a line by defining the distance of the point from the current position and angle made to that line. The angle referred in Auto cad is given in figure. Consider the following example



Command

LINE

Specify the first point

20,20

Specify next point

@ 60 L 0

@ 30 L 90

@ 40 L 180

@ 20 L 90

@ 20 L 180

@ 50 L 270

Press ENTER to complete the drawing