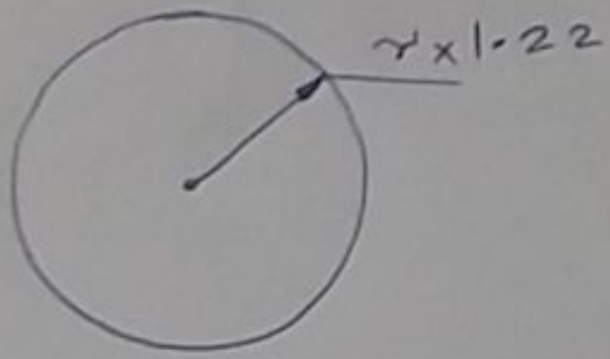
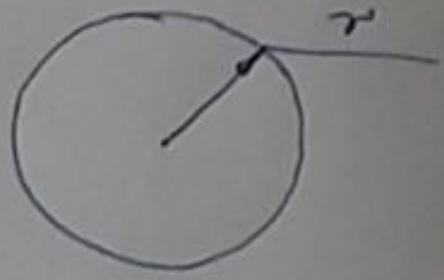
Isometric View & Isometric projection of Sphere & hemisphere

Sphere with radius r

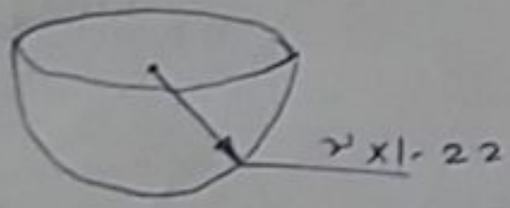


Isometric View

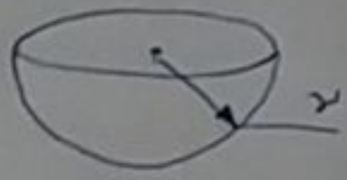


Isometric projection

hemisphere with radius r



Isometric View



Isometric projection

{hint:-

	Iso. View	Iso. proj
For solids other than sphere & hemisphere	T.L	0.82T.L
For Sphere & hemisphere	x T.L	T.L

$$\frac{T.L}{x} = \frac{0.82\ T.L}{T.L}$$

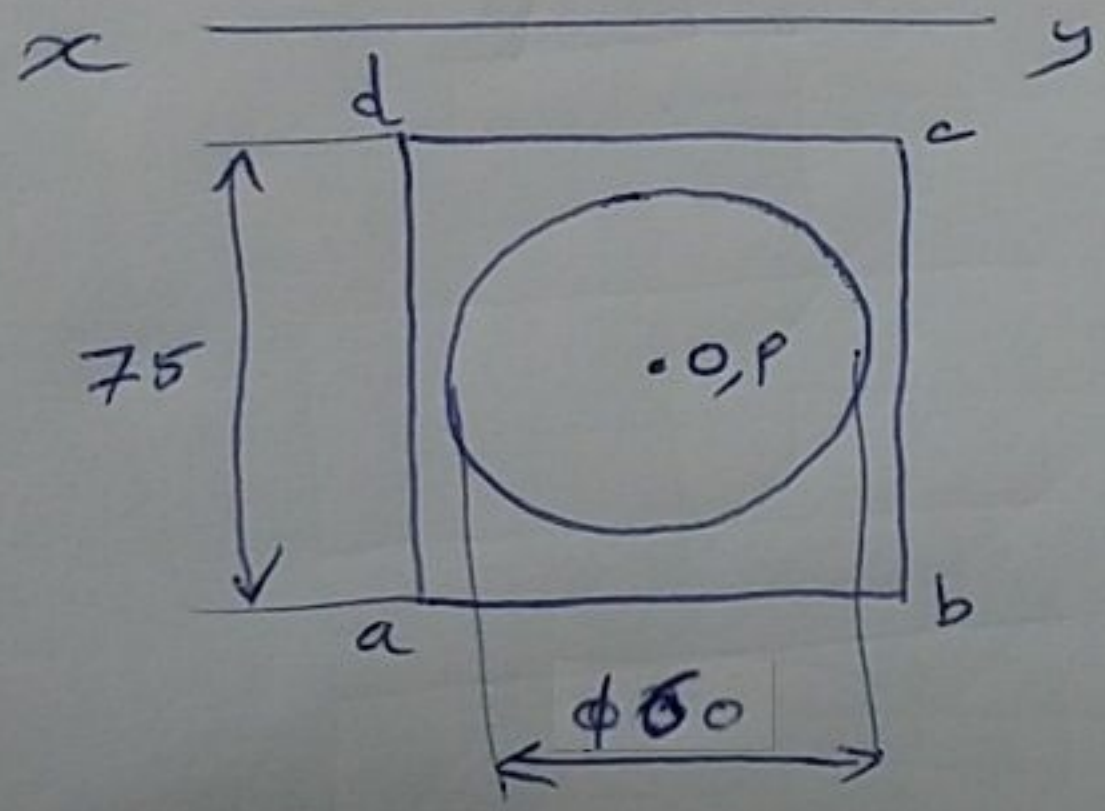
$$\frac{1}{x} = \frac{0.82}{1}$$

$$x = 1.22$$

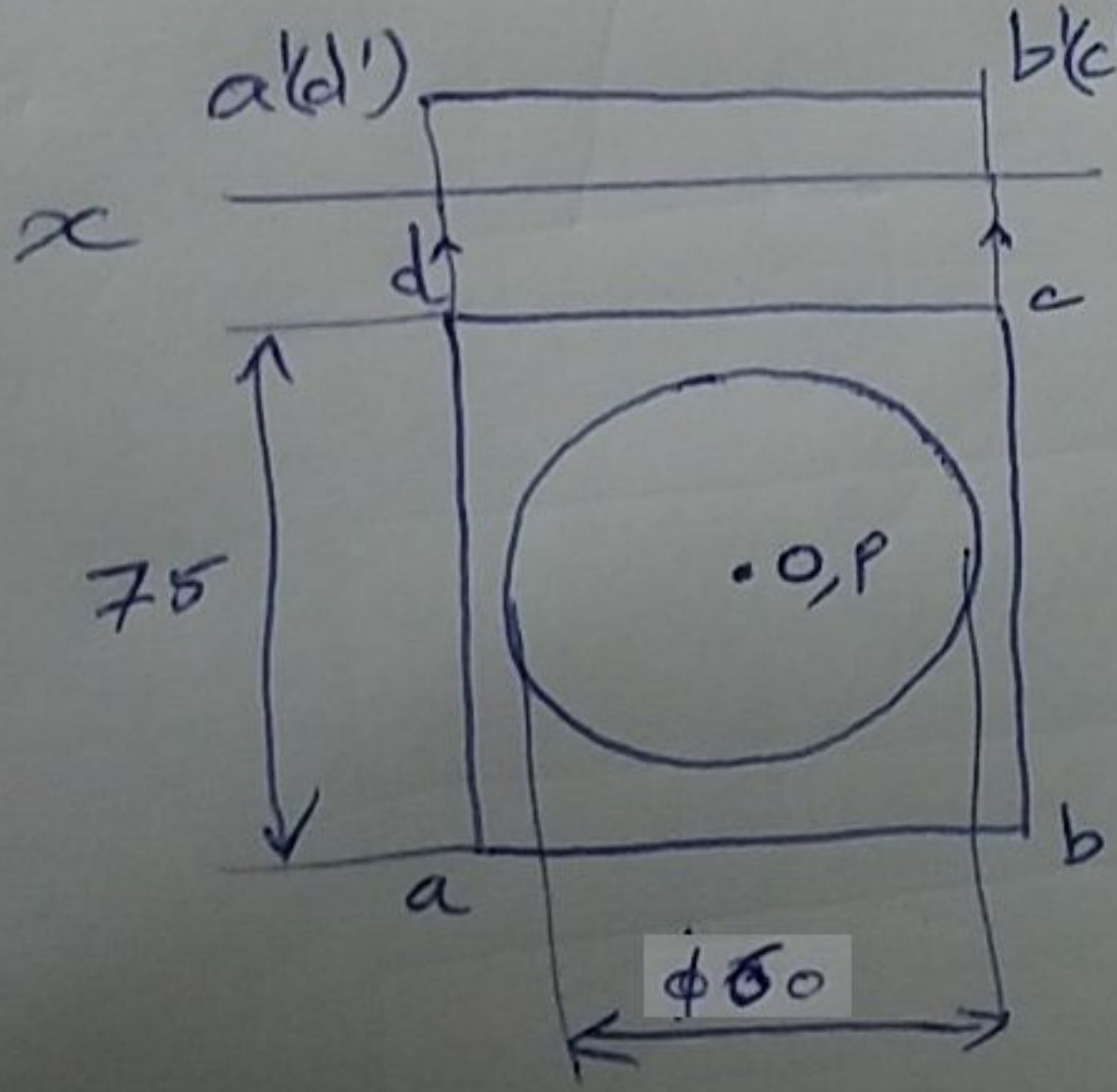
So for sphere & hemisphere $\Rightarrow$ Iso. View $\Rightarrow$ T.L x 1.22 }

A sphere of radius 30mm is resting centrally on the top surface of a square plate of side 75mm and of negligible thickness. Draw the iso View and iso proj.

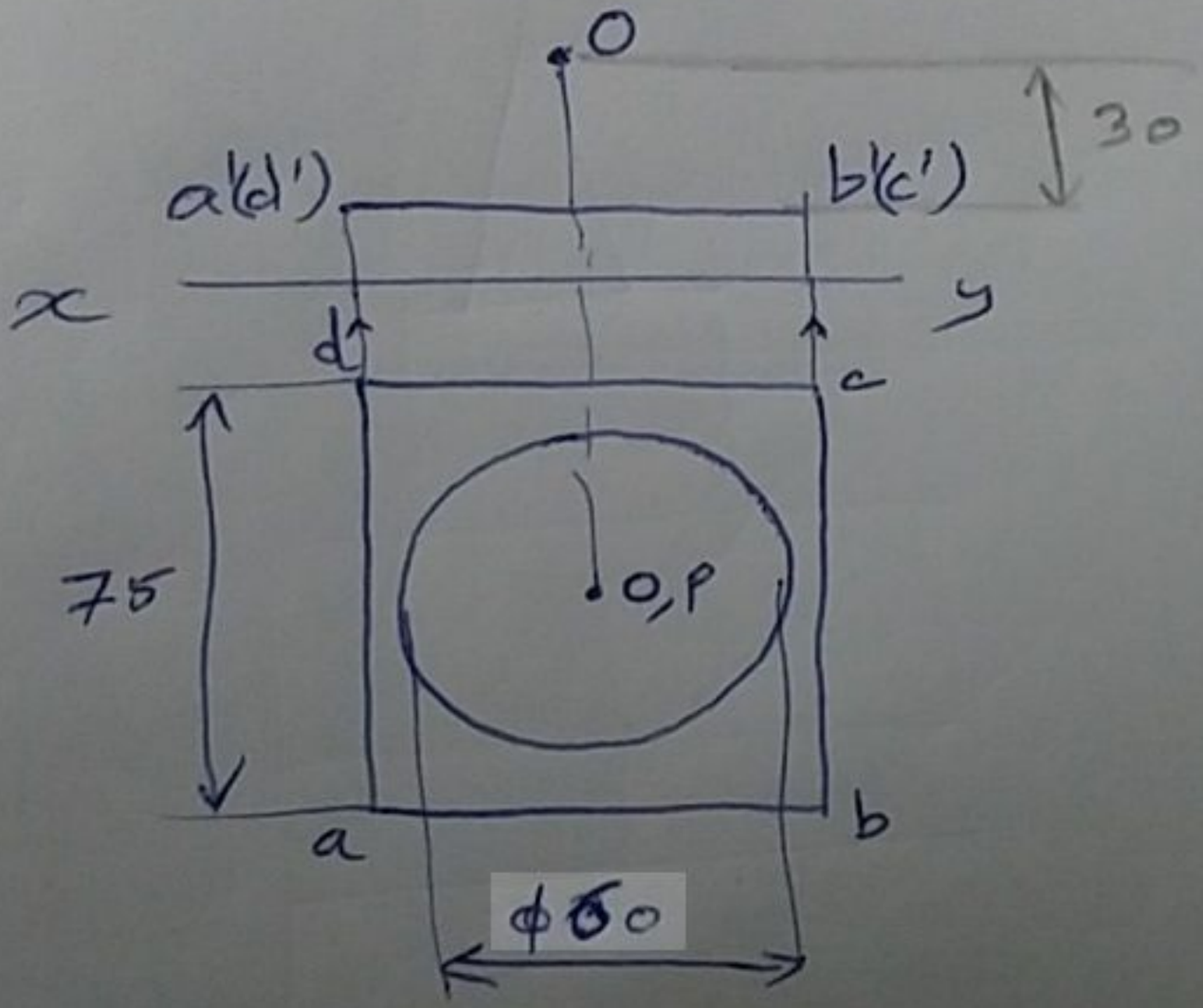
Iso. View



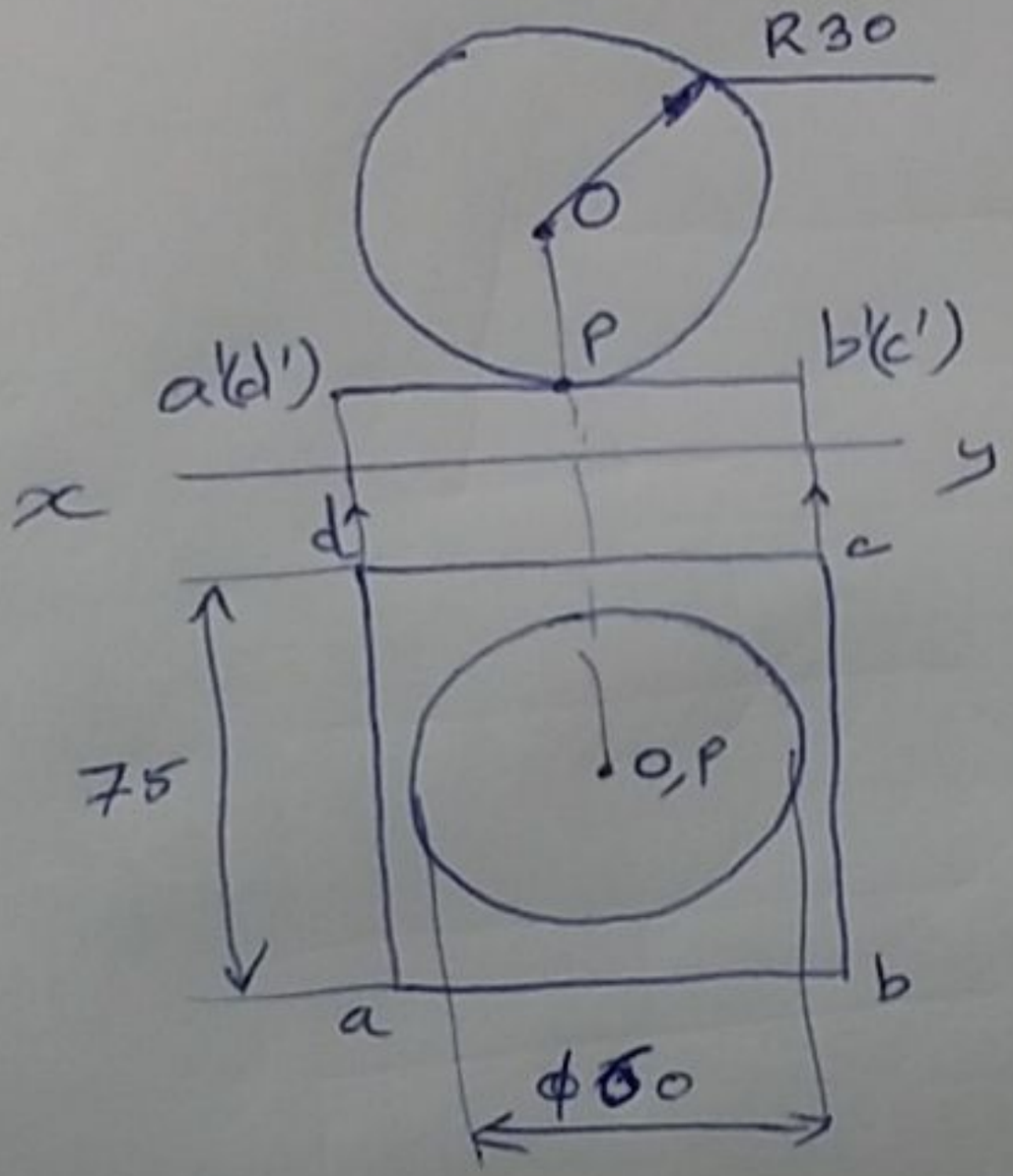
Iso. Views



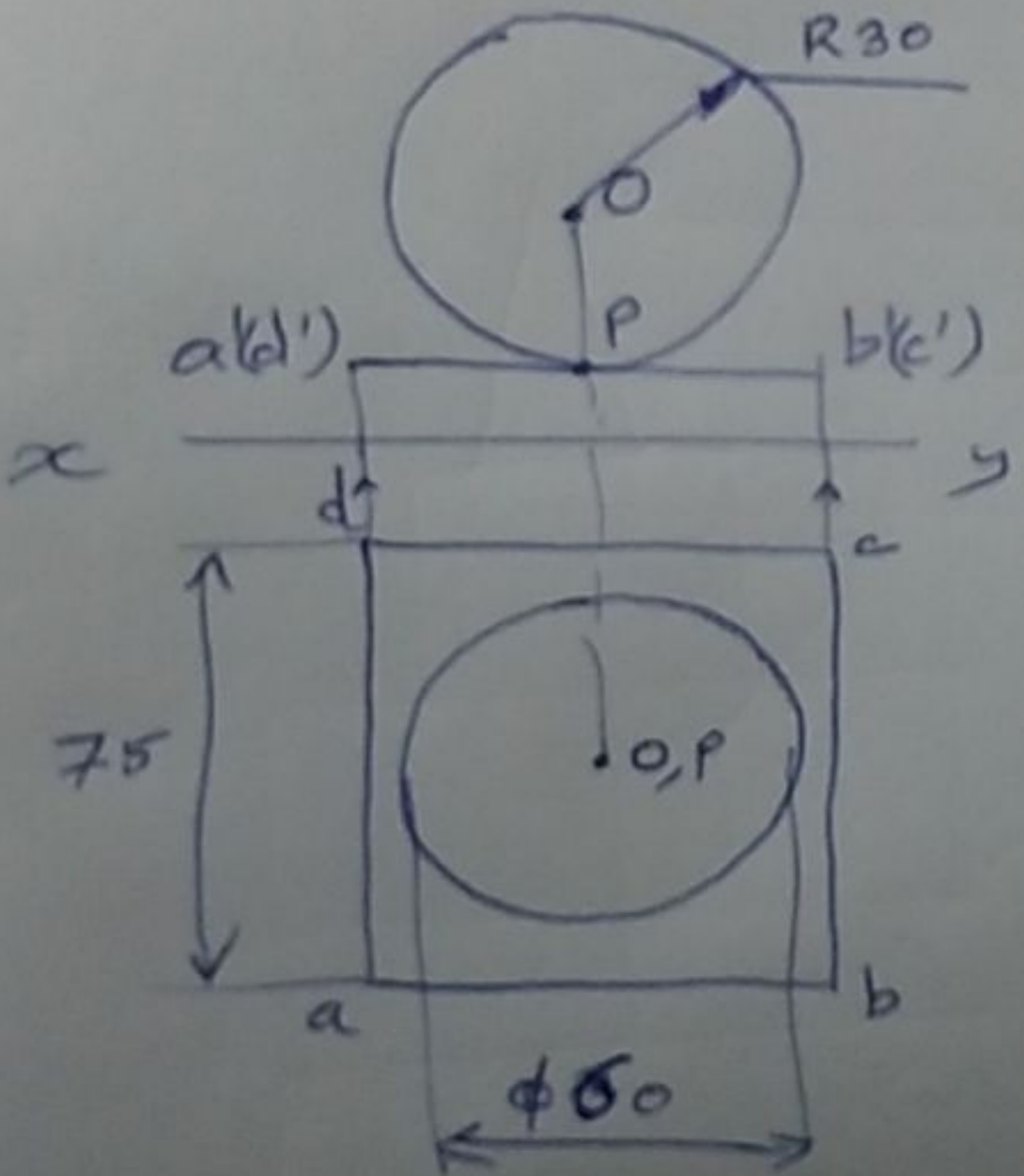
Iso. View



Iso. View

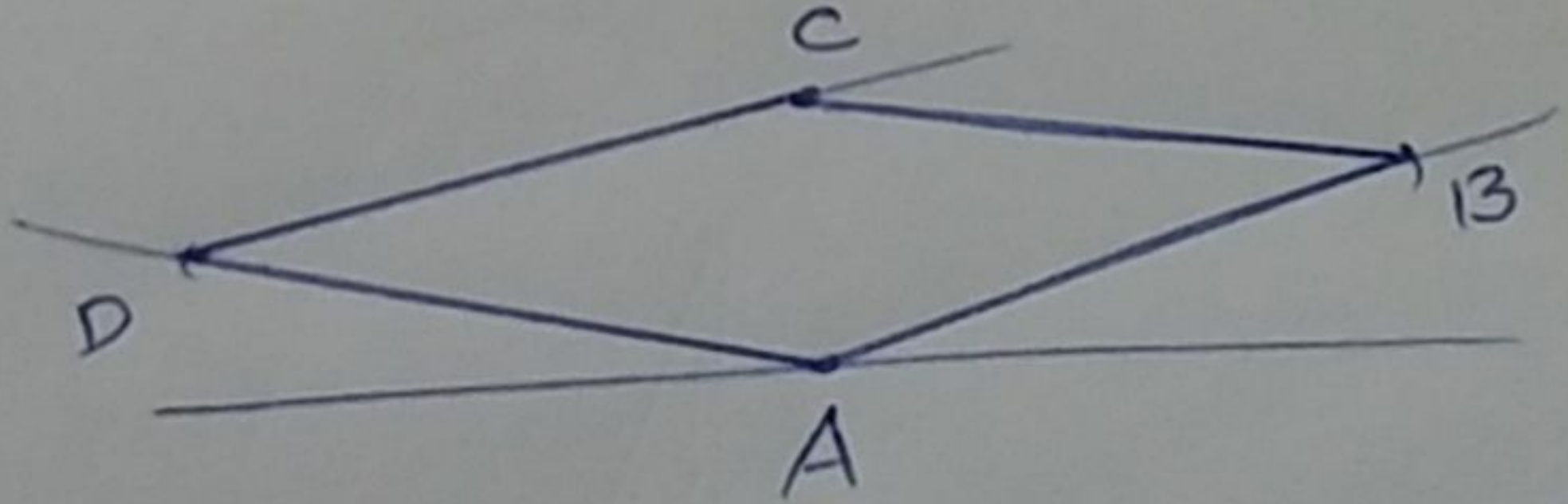


ISO. View

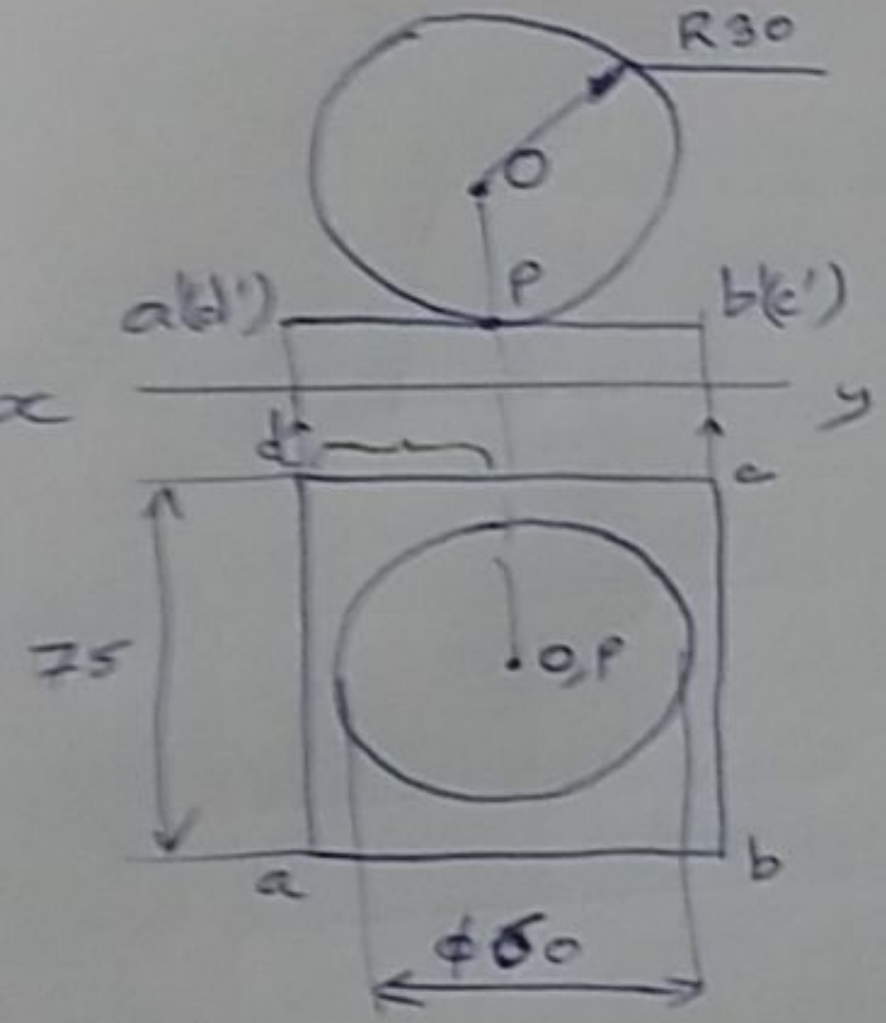


O → Centre of sphere

P → Resting pt of sphere

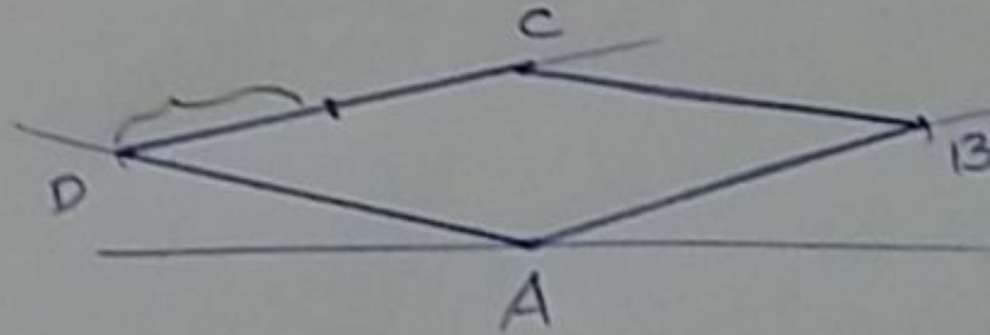

C
B
D
A

Iso. View

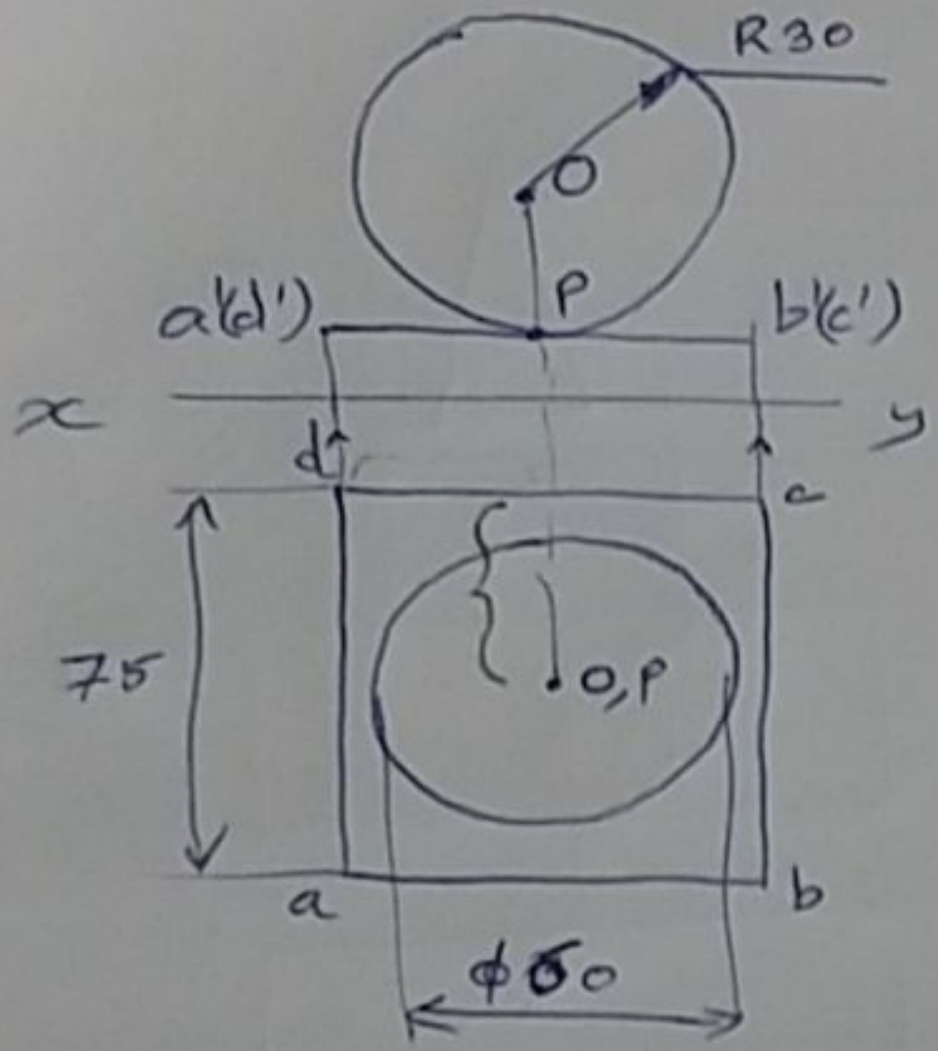


O → Centre of sphere

P → Robin pt. of sphere

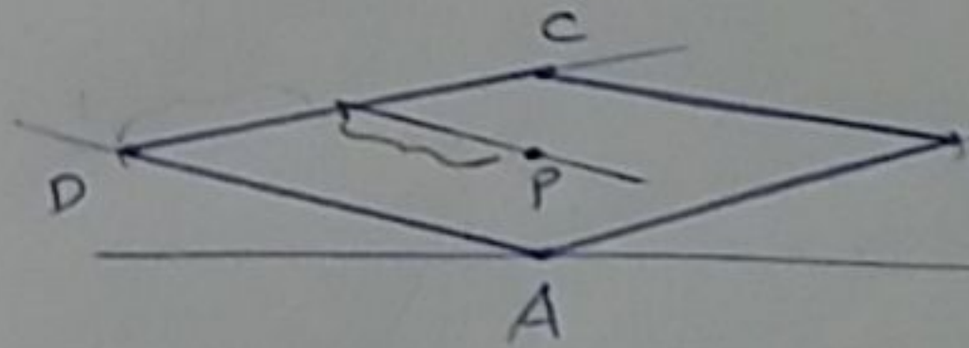


Iso. View

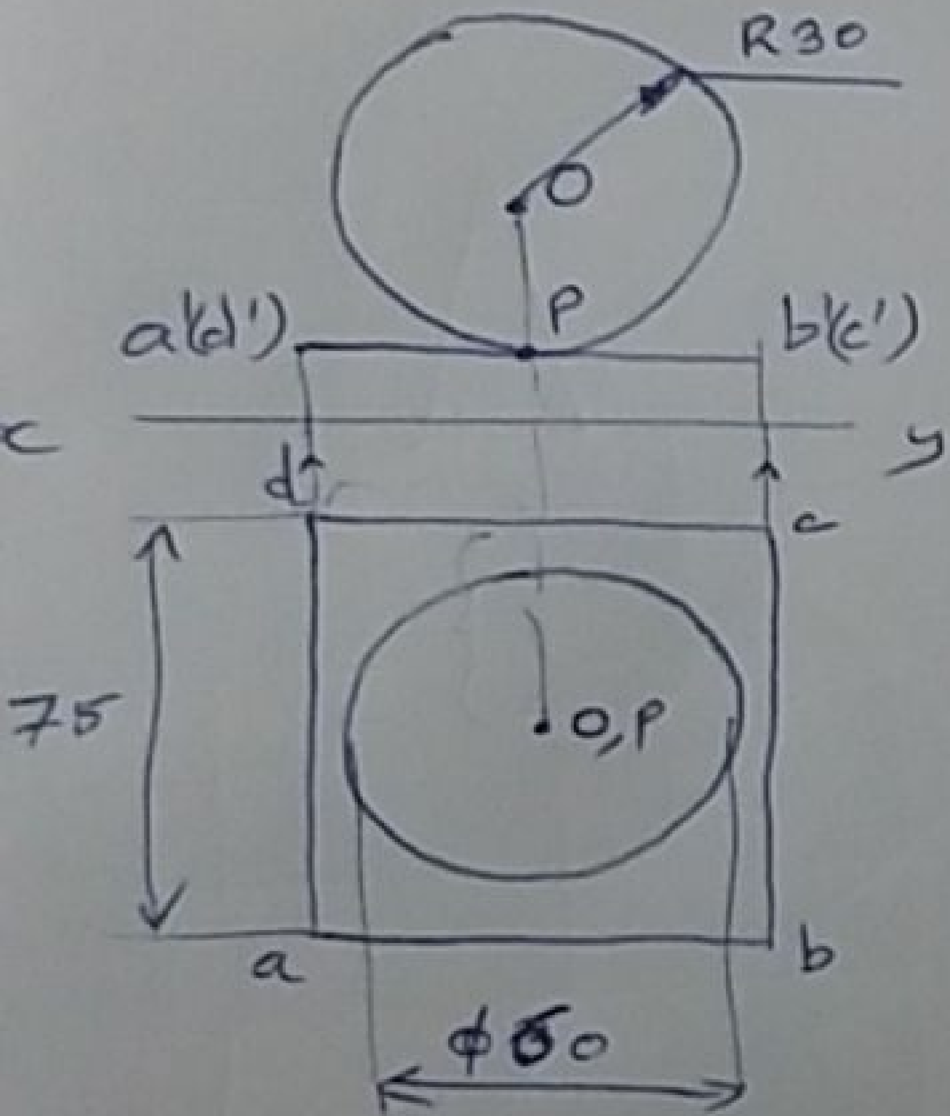


O → Centre of sphere

P → Reqd. pt. of sphere

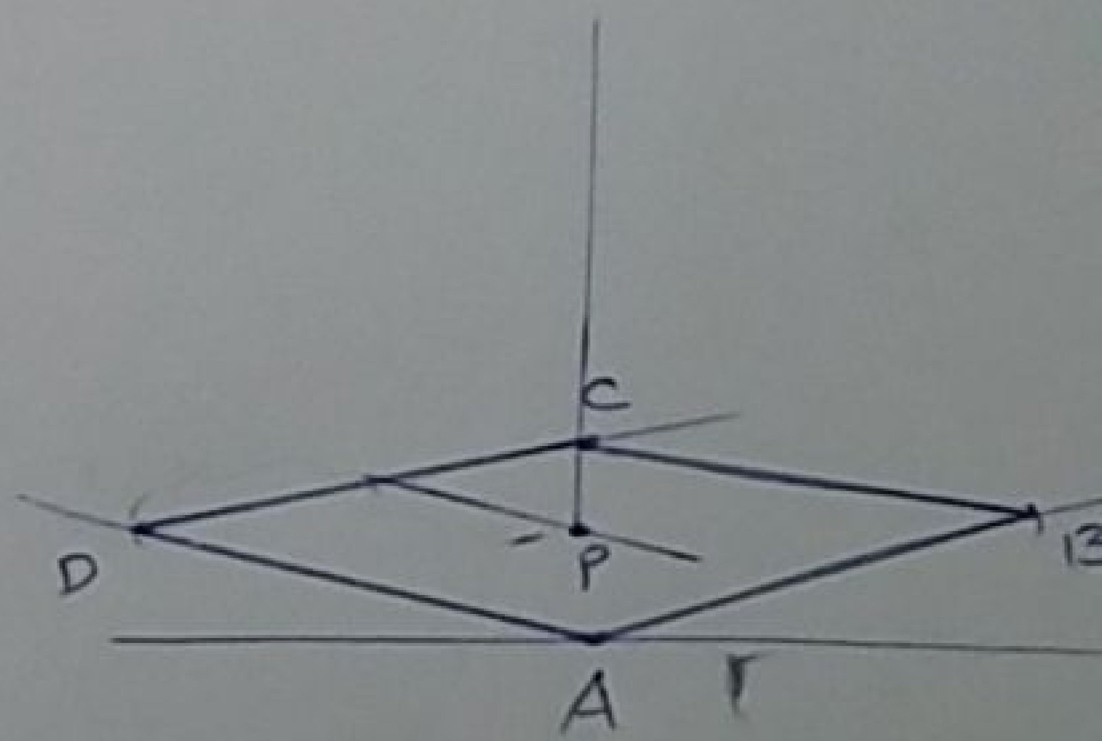


Iso. View

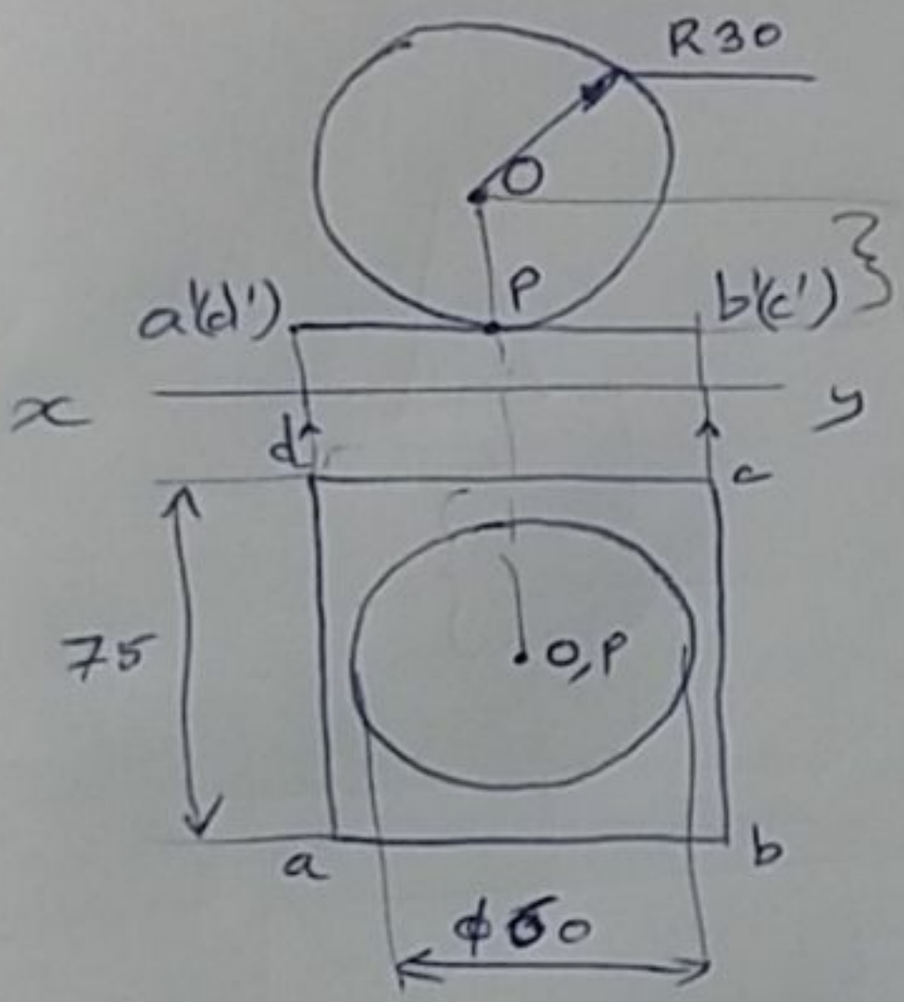


O → Centre of sphere

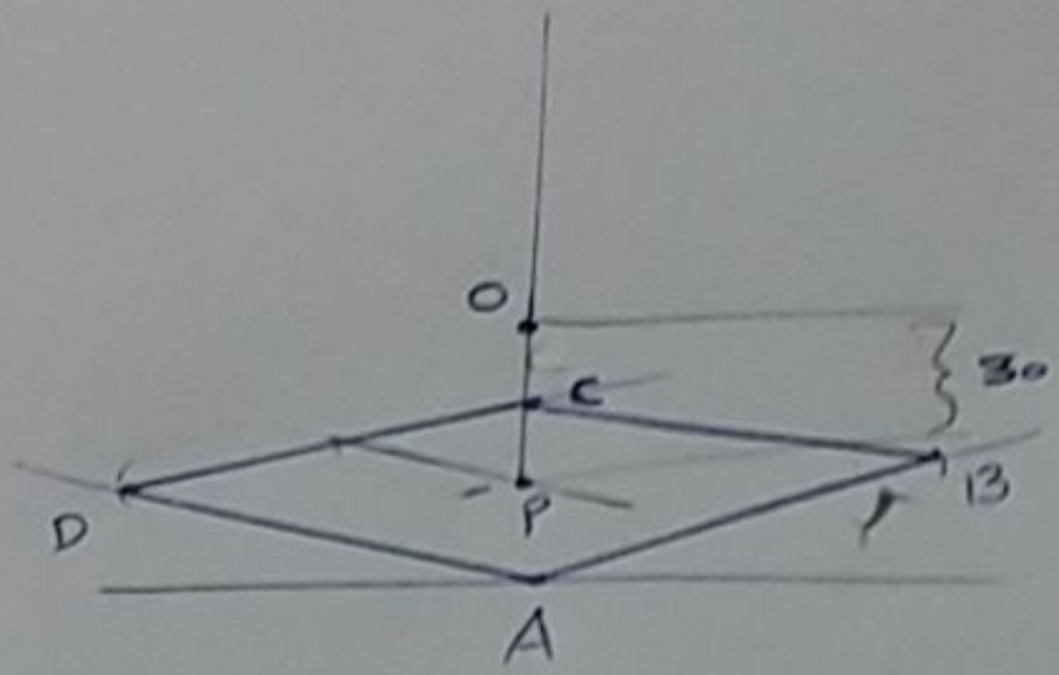
P → Resting pt. of sphere

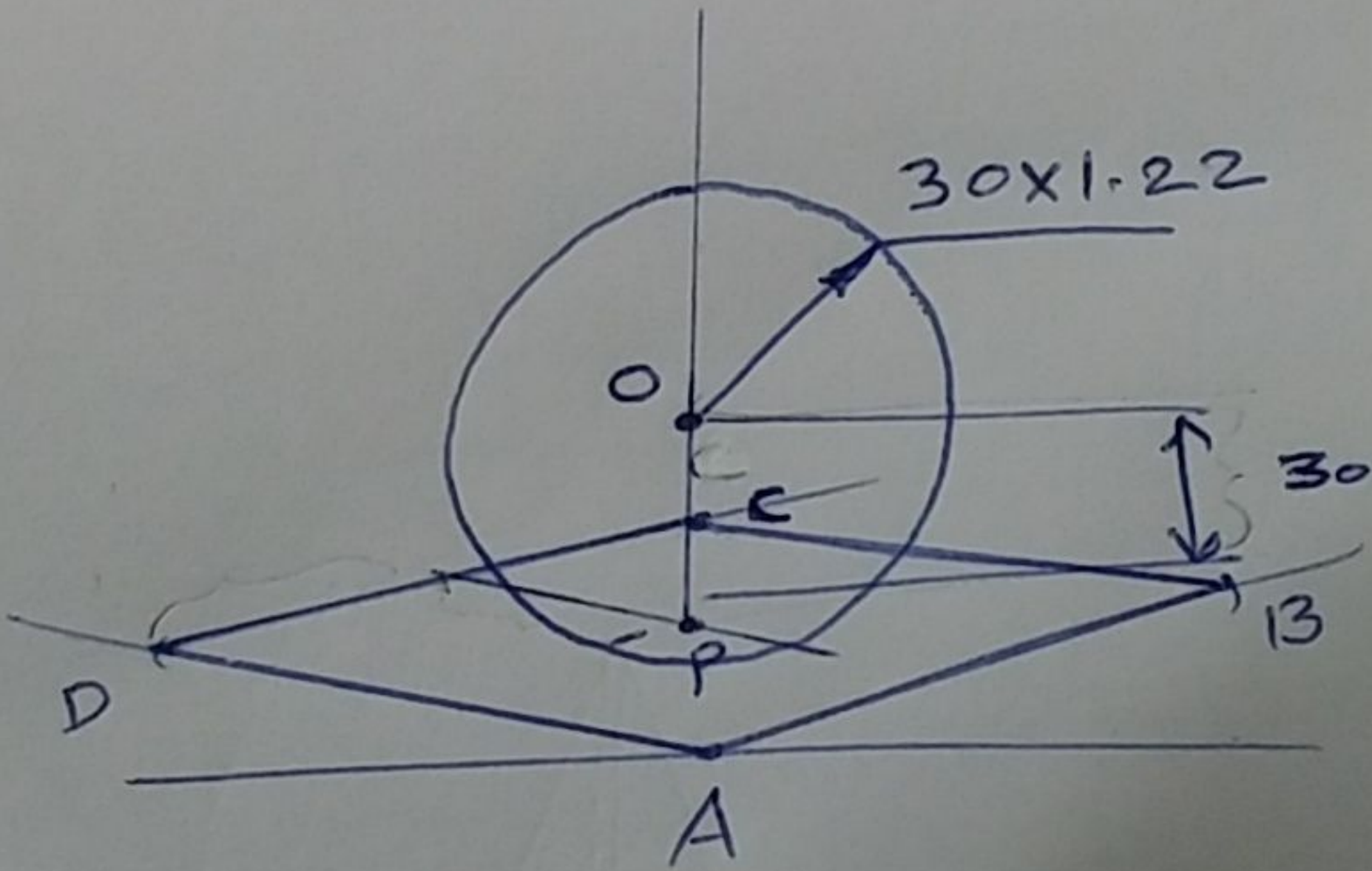


Iso. View

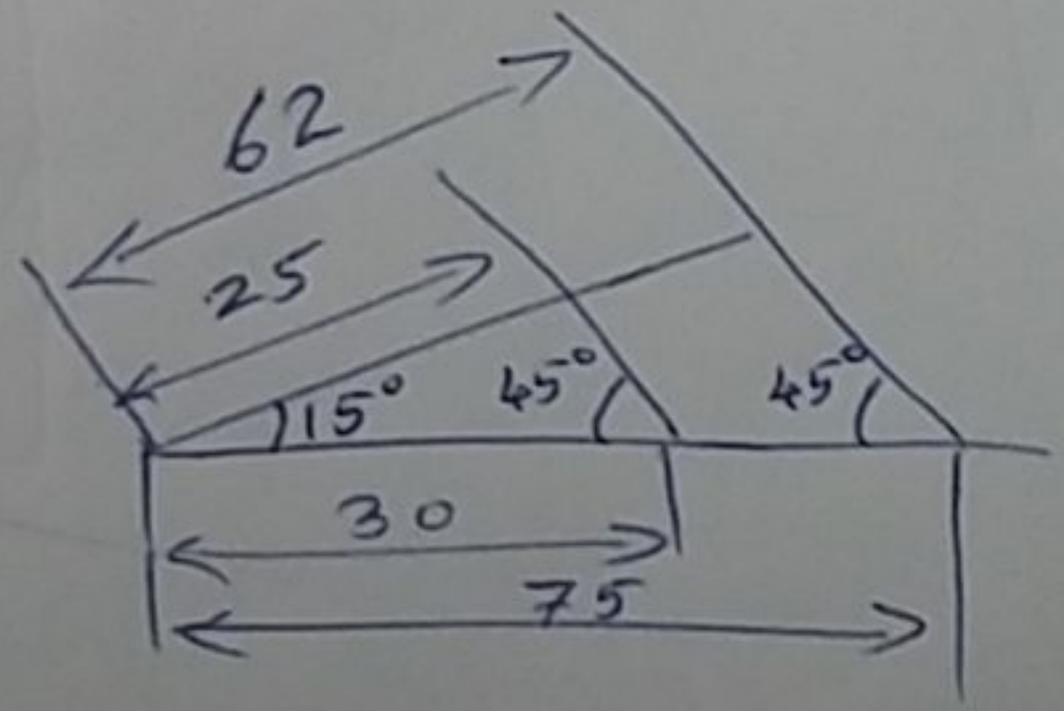


O → Centre of sphere
P → Resting pt. of sphere

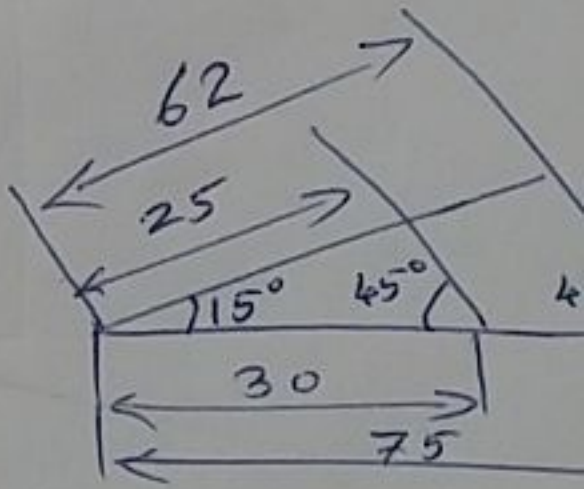


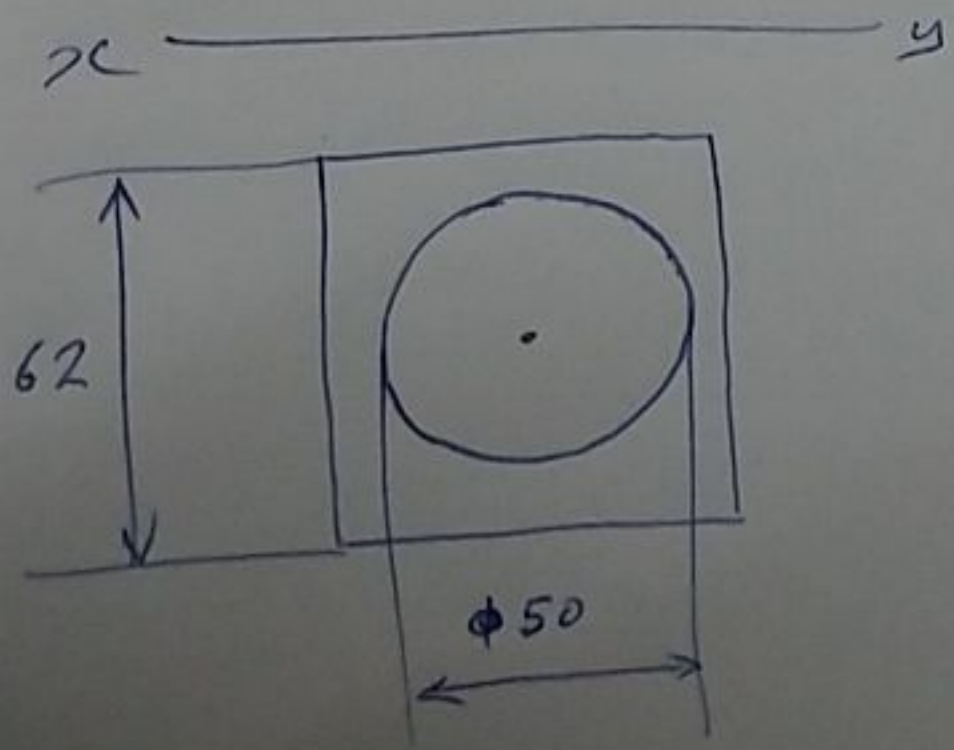

30x1.22
O
30
C
B
P
D
A

Iso. projection

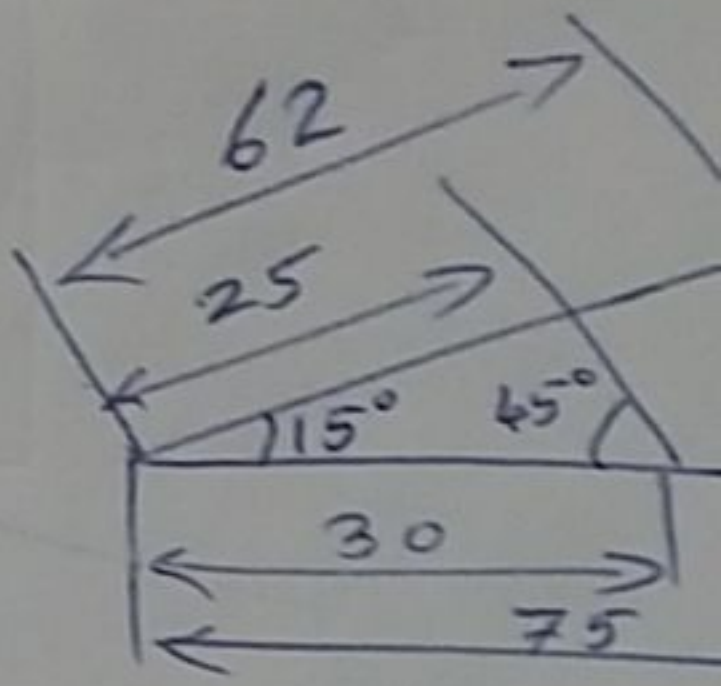


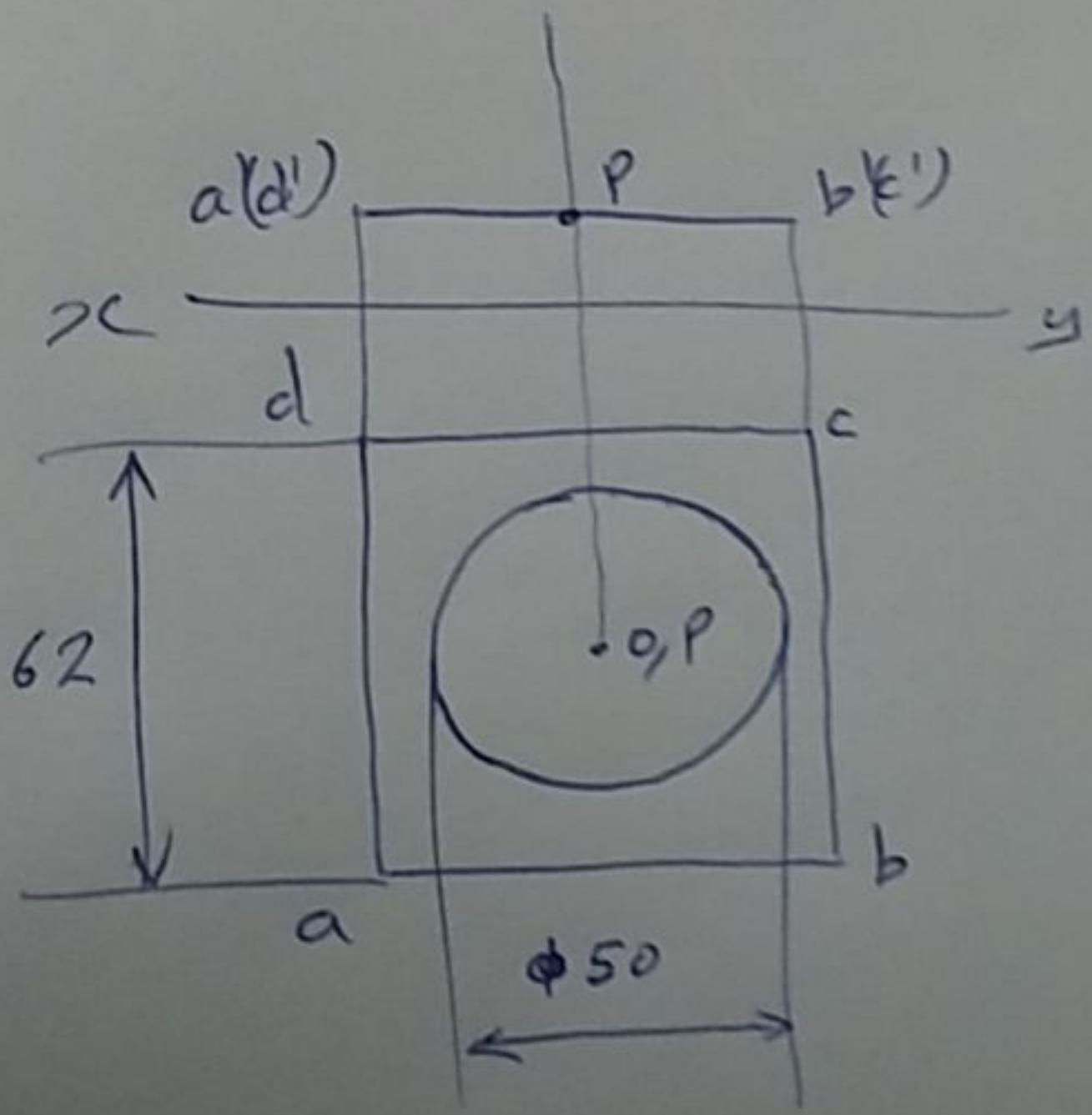
Iso. projection



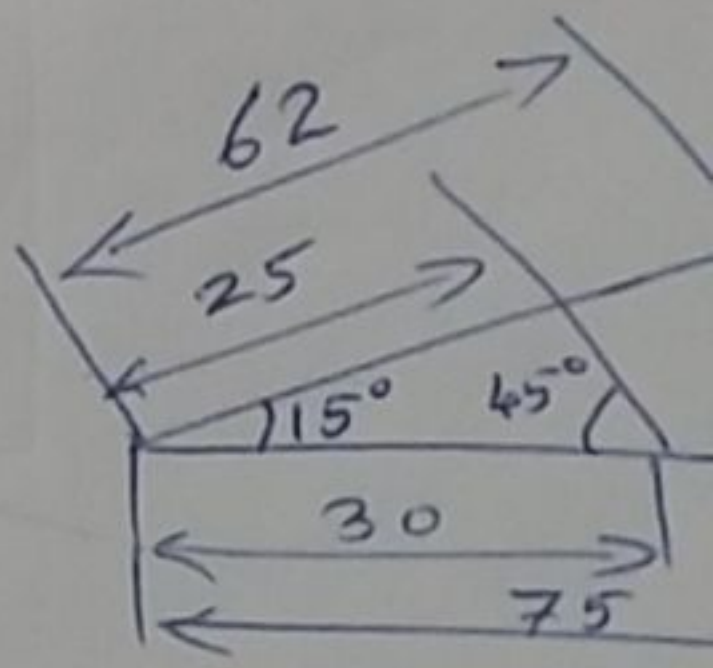


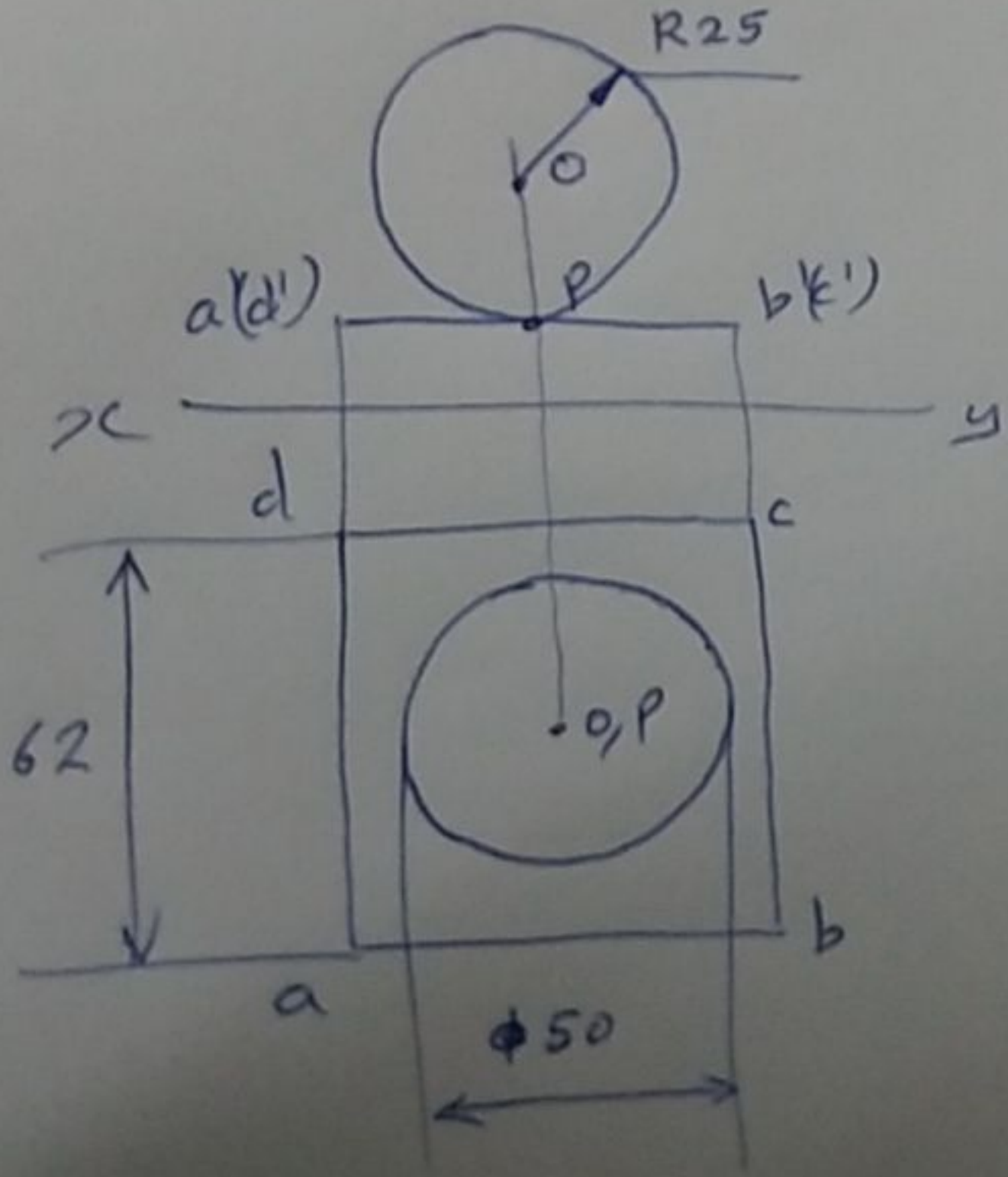
Iso. projection



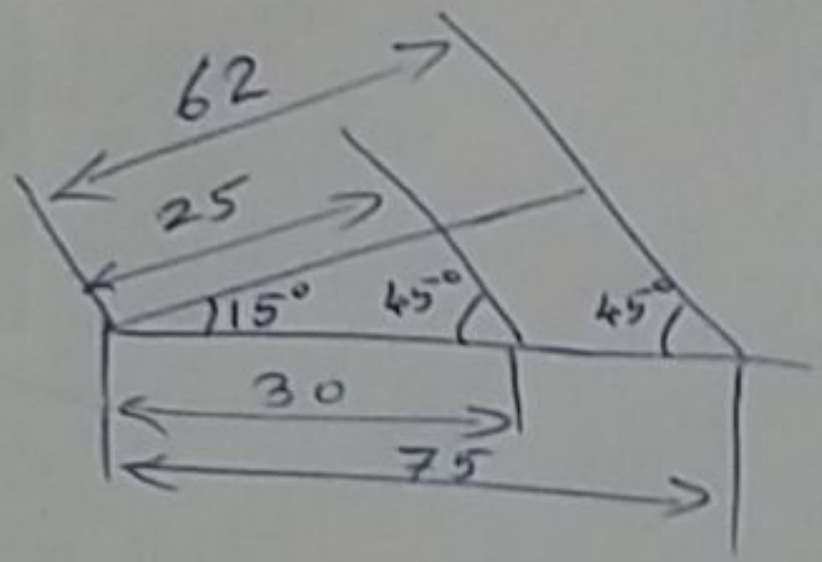


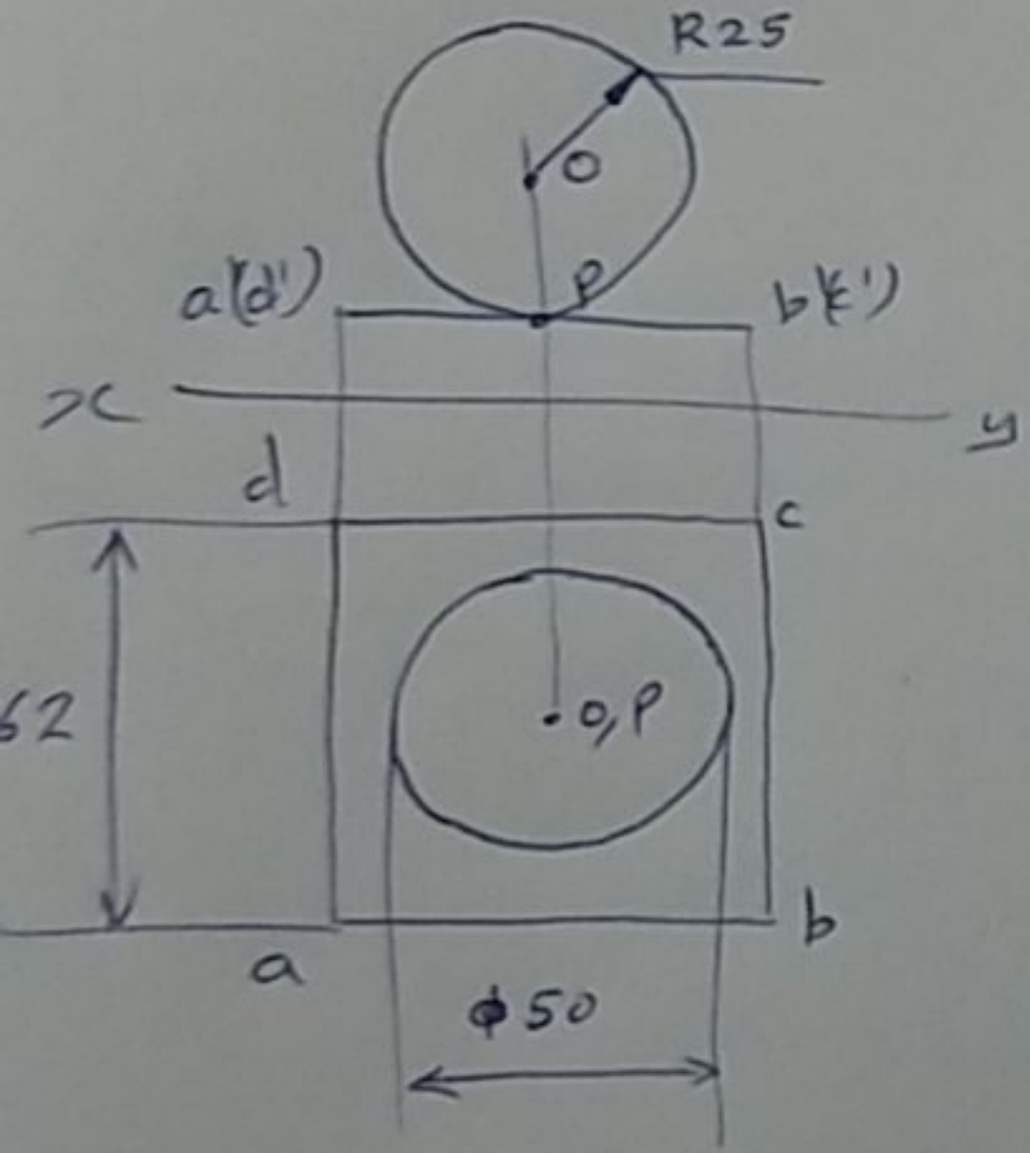
Iso. projection

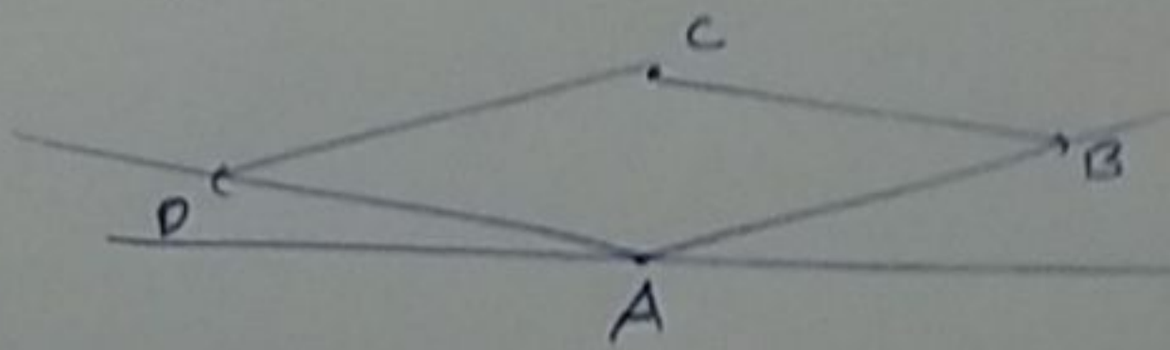




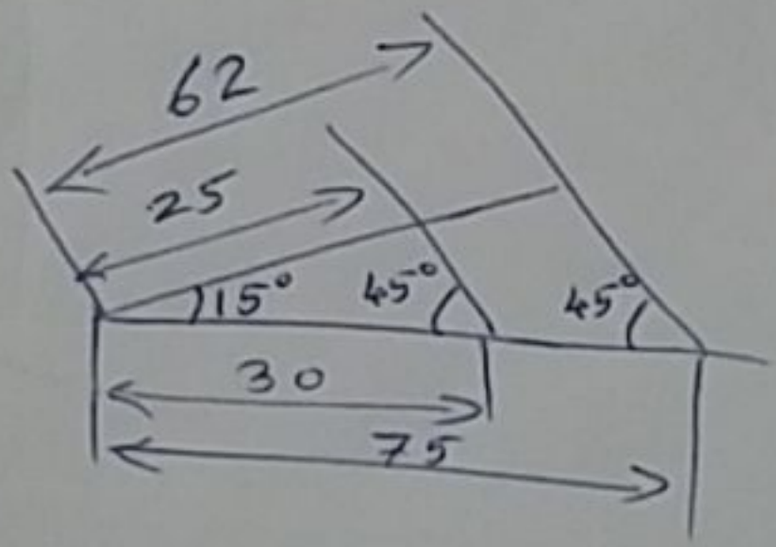
Iso. projection

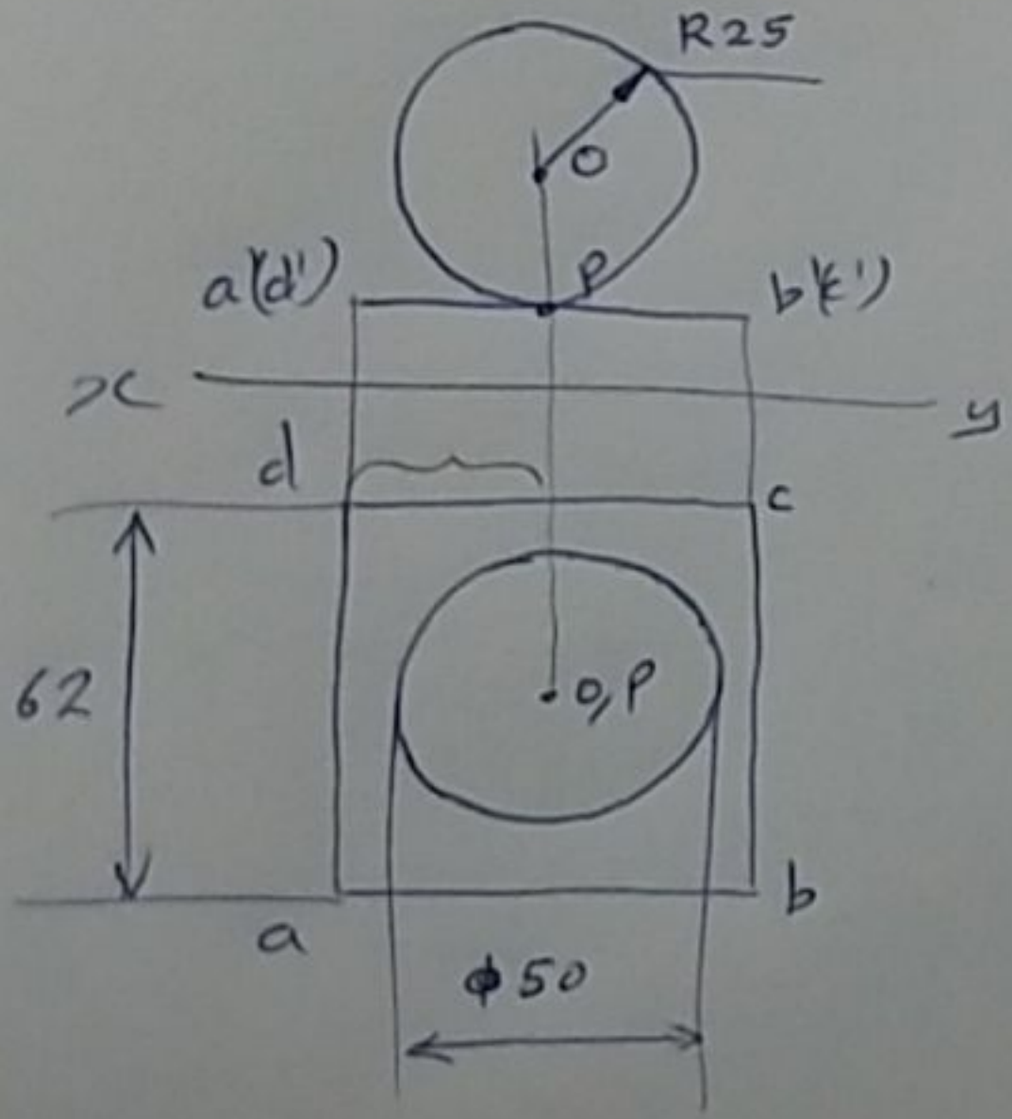


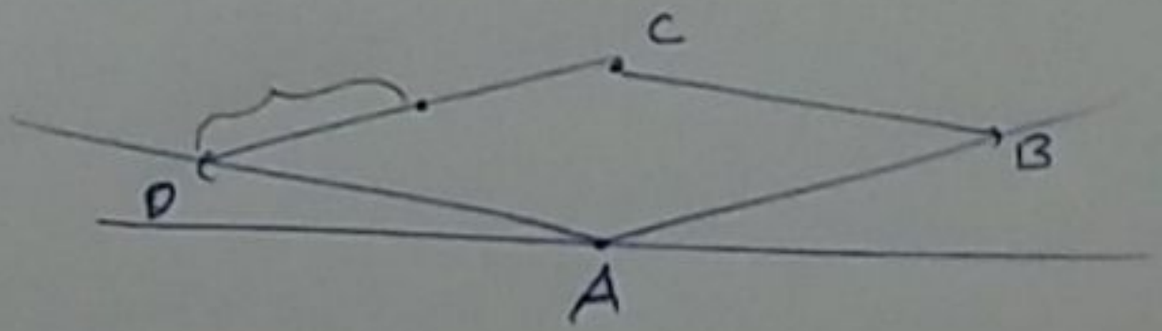




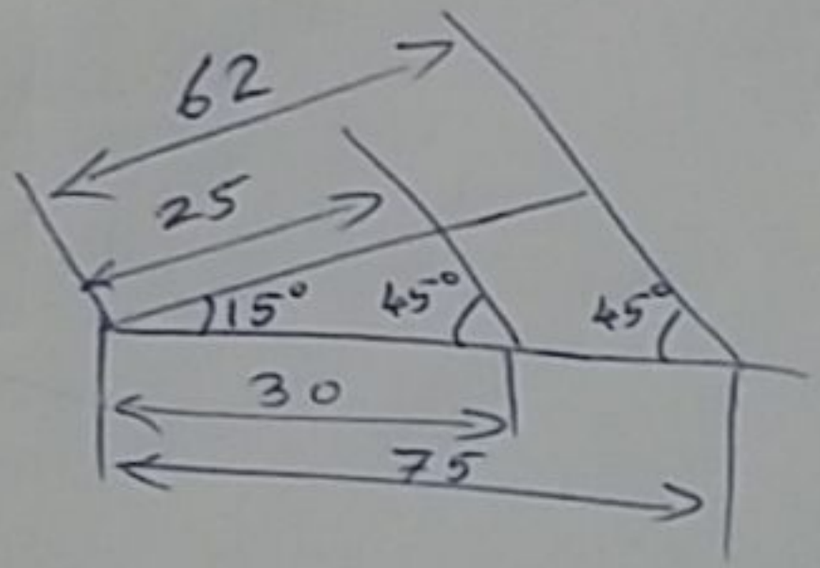
Iso. projection

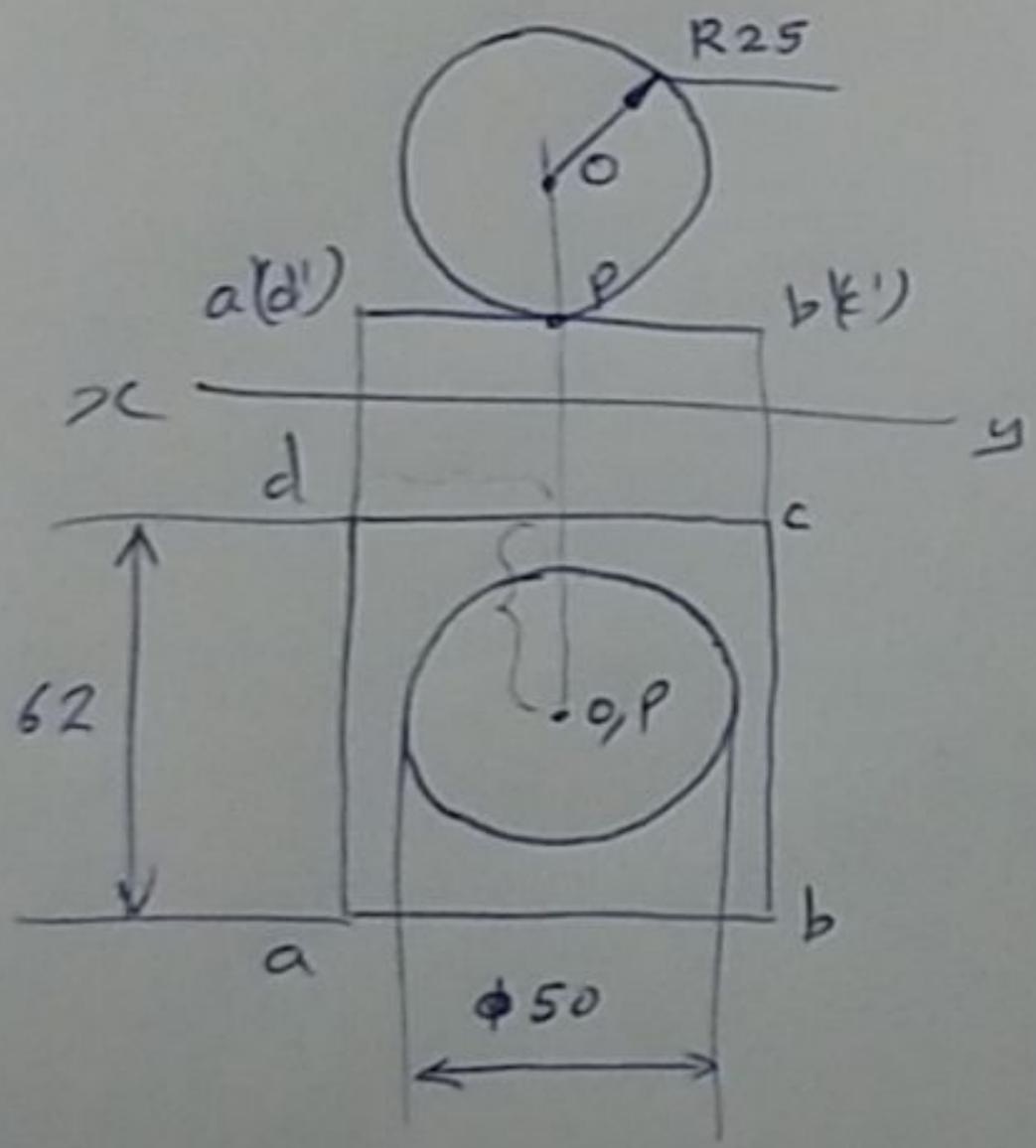


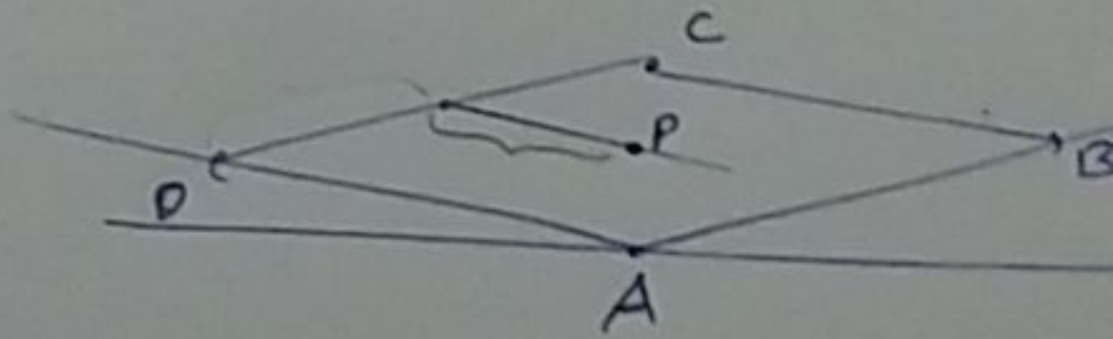




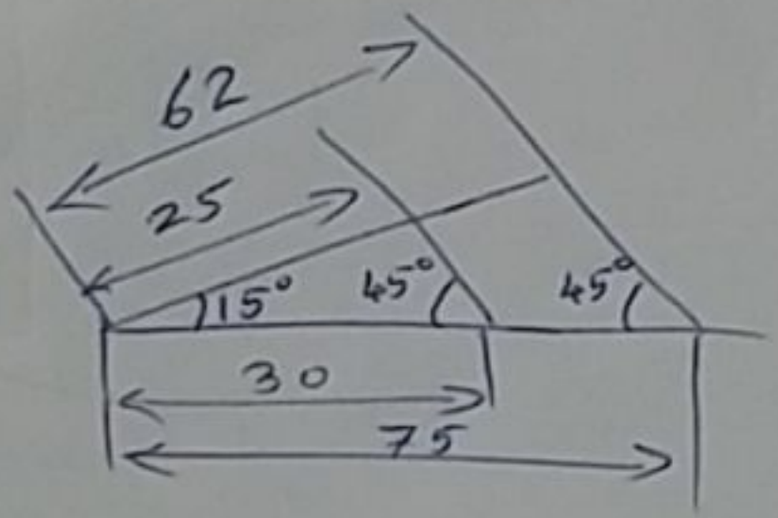
Iso. projection

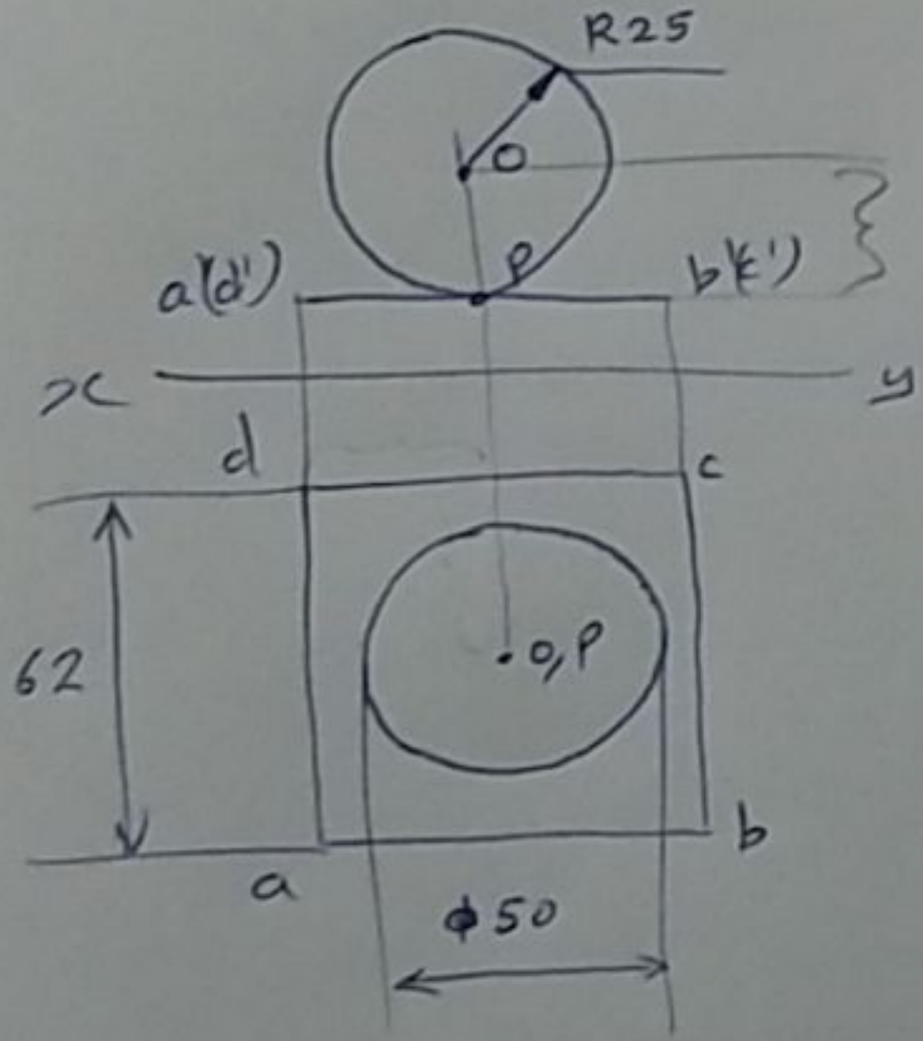


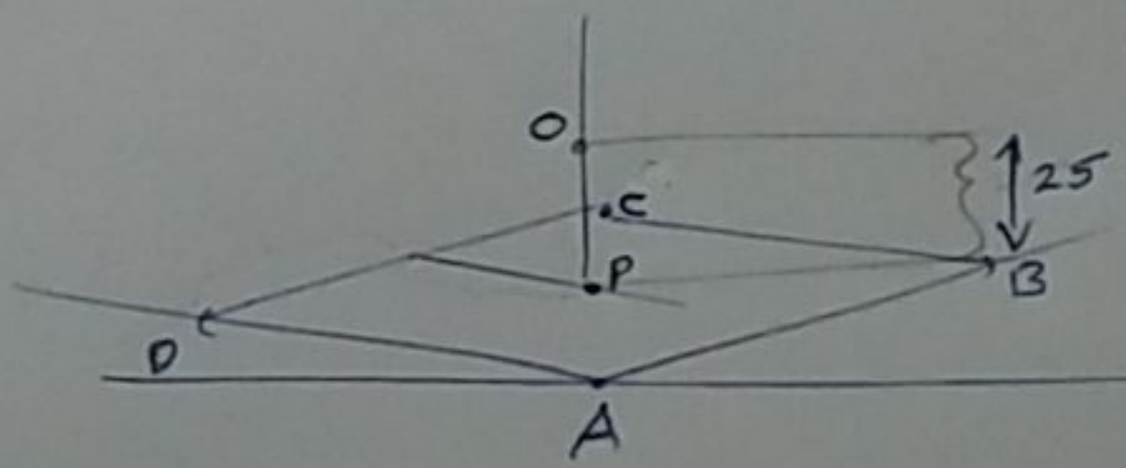


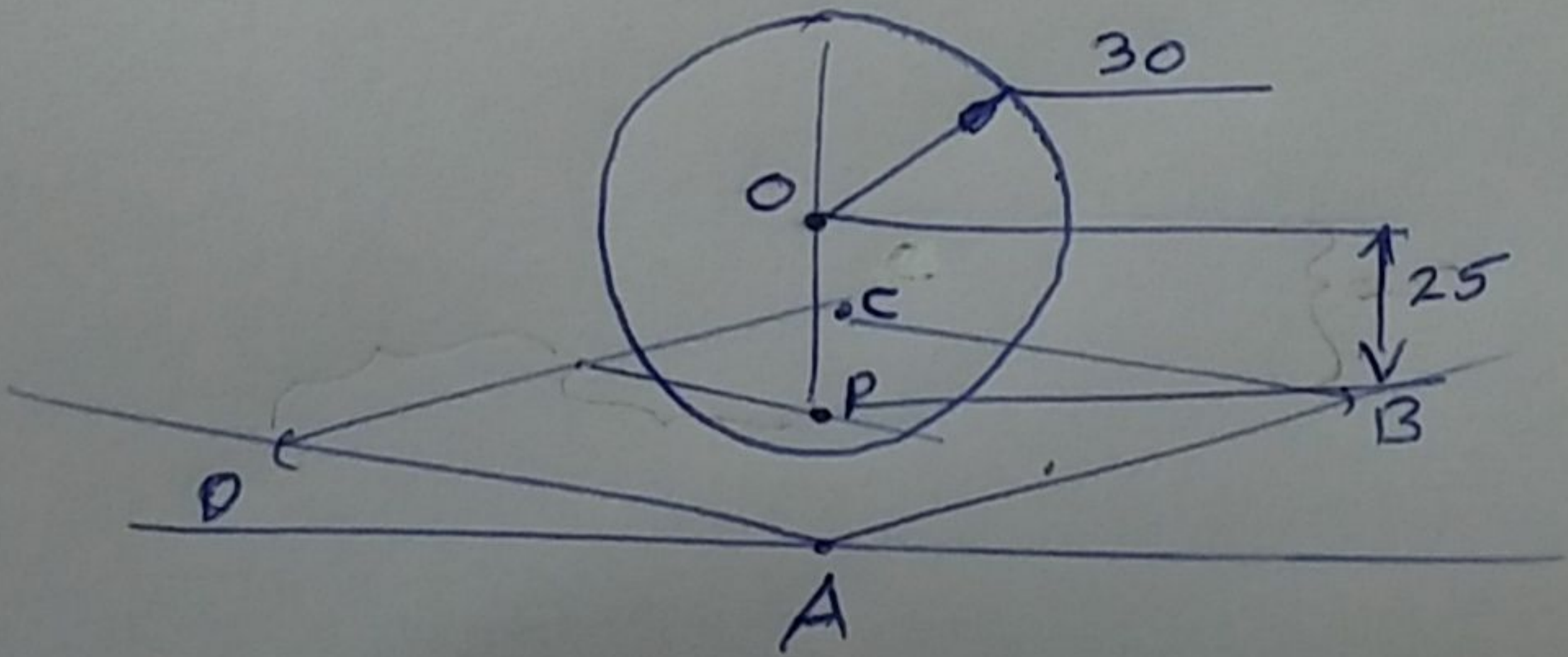


1) Iso. projection



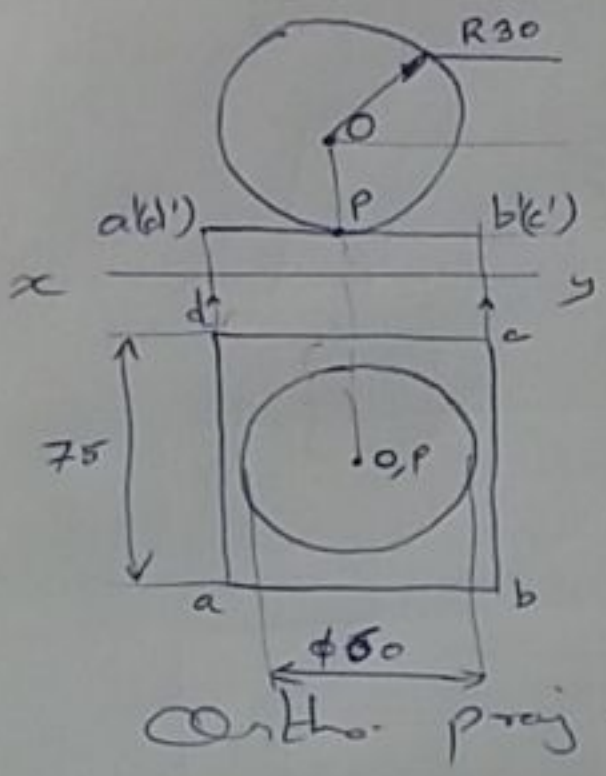





30
O
C
25
P
B
D
A

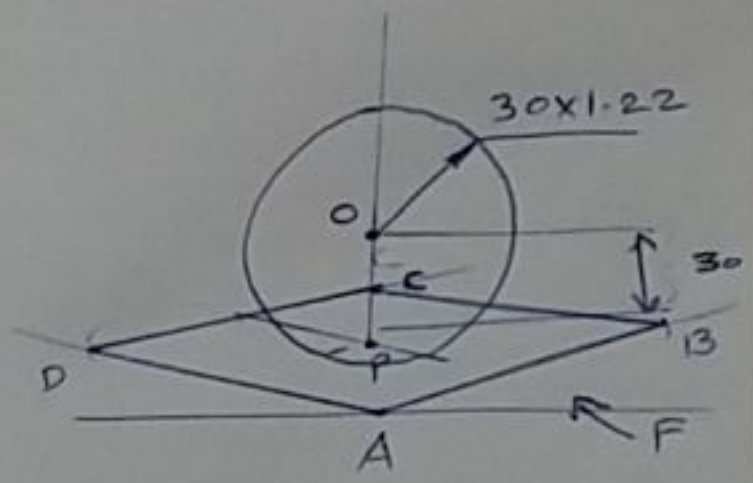
A sphere of radius 30mm is resting centrally on the top surface of a square plate of side 75mm and of negligible thickness Draw the iso View and iso. proj.

Iso. View



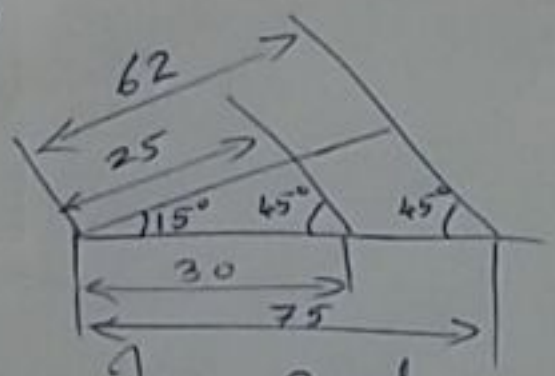
Ortho. proj.

O → Centre of sphere
P → Resting pt of sphere



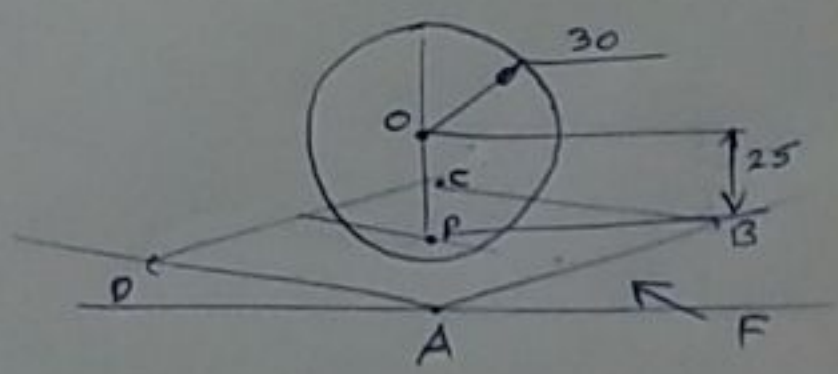
Iso. View

Iso. projection



Iso. Scale

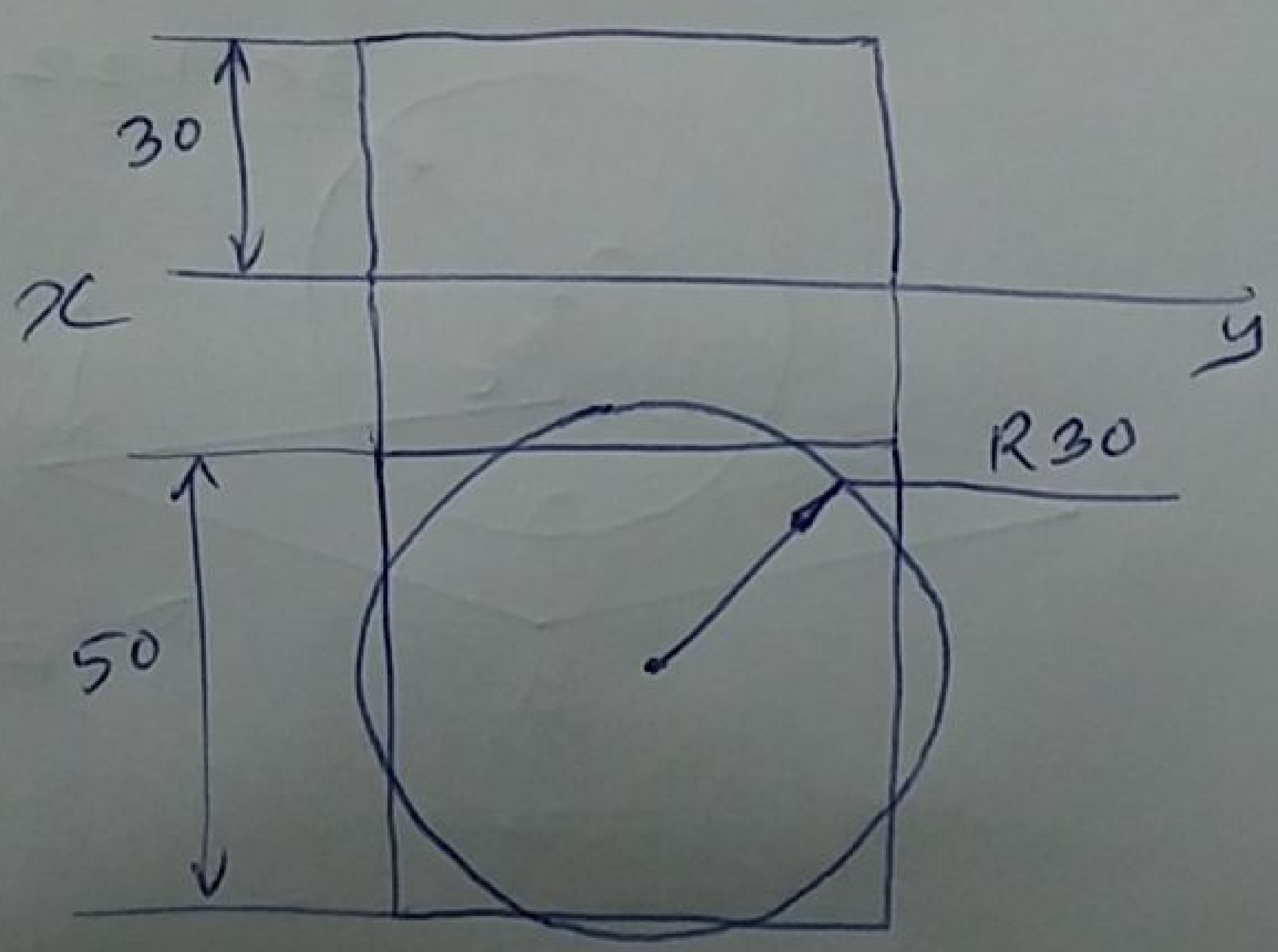
Ortho. proj. wing Iso. Scale



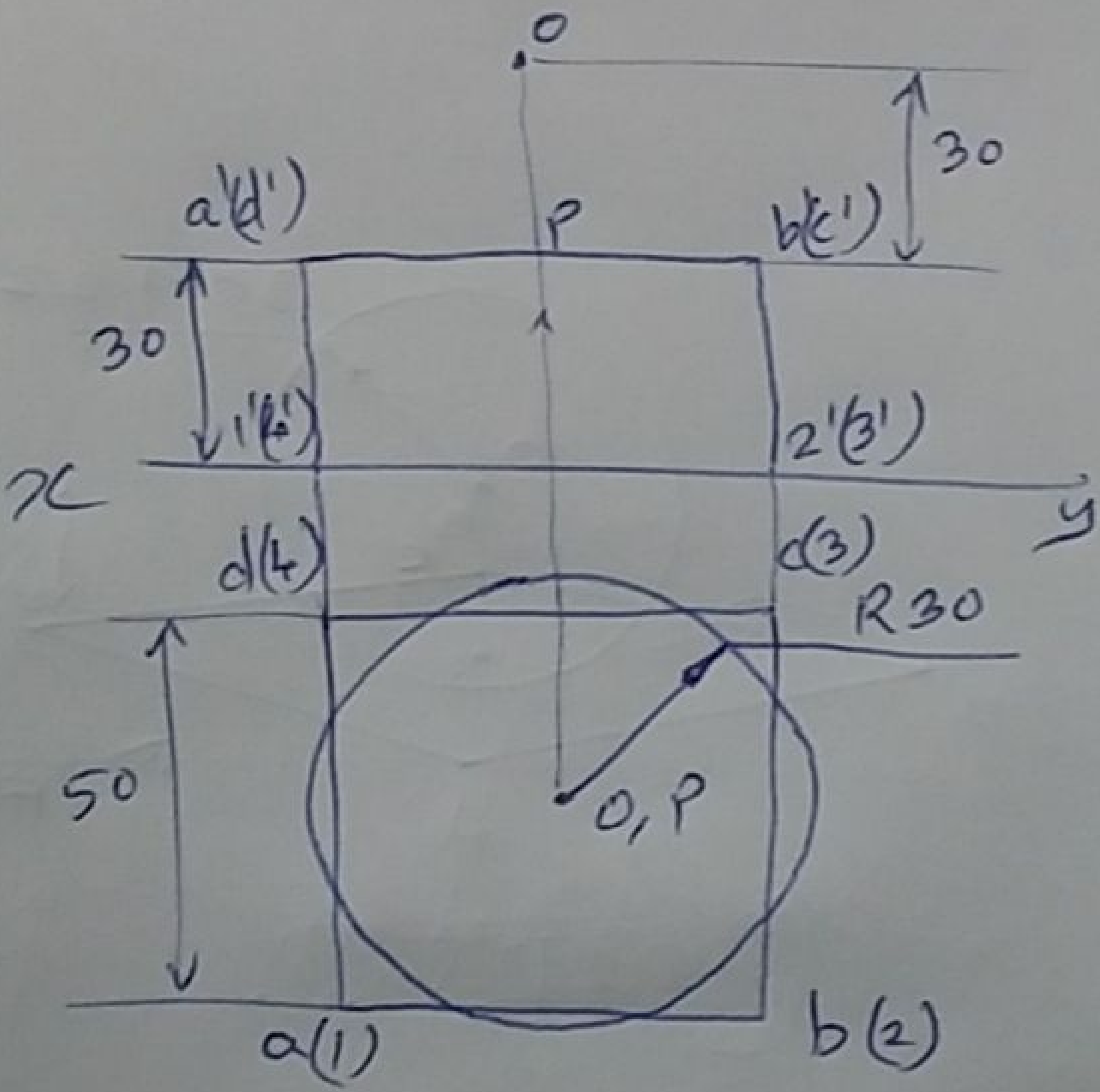
Iso. proj.

Draw the iso. view & iso. proj. of a sphere dia. 60mm
kept centrally on a square prism side of base
50mm & Ht 30mm.

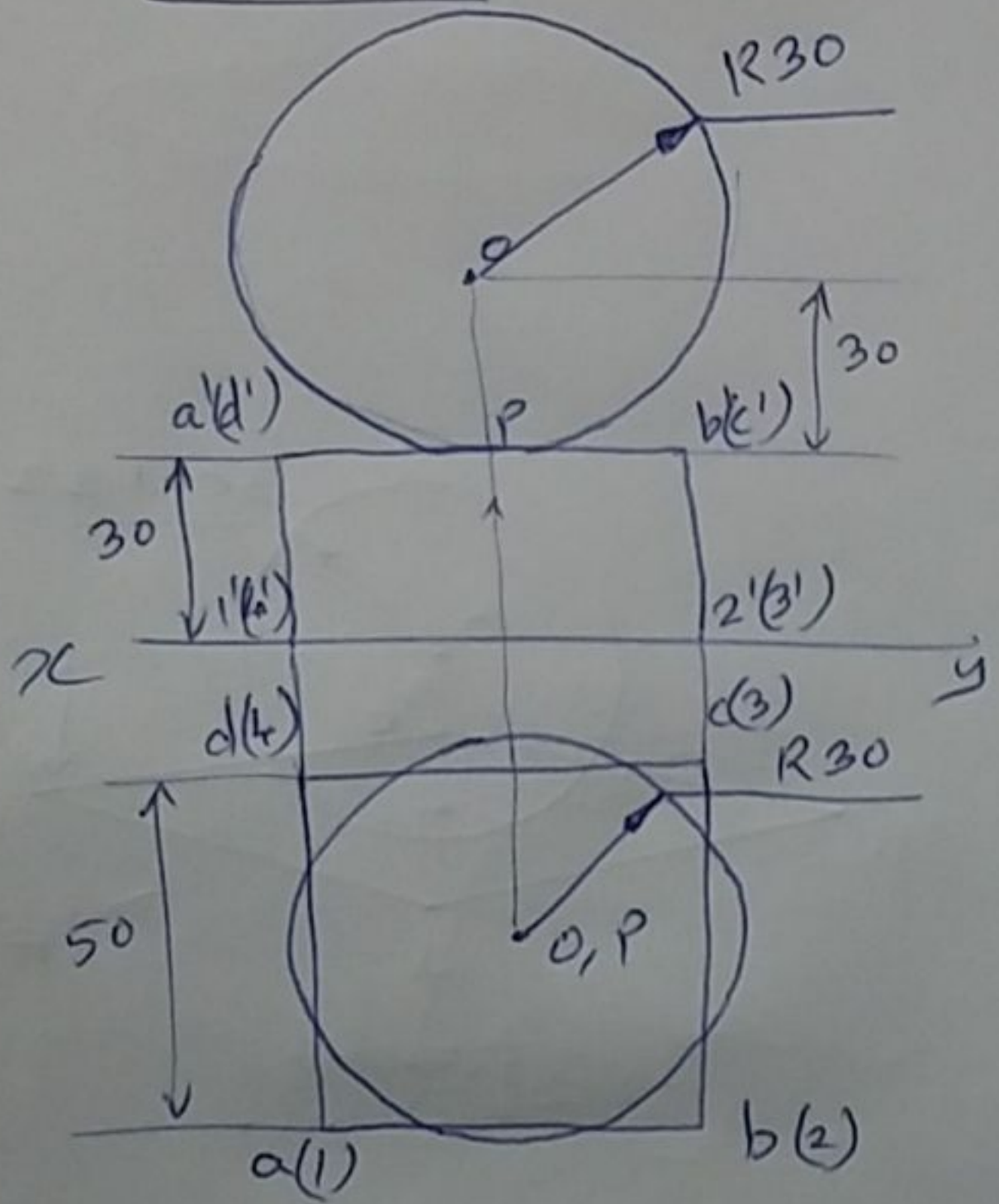
Iso. View

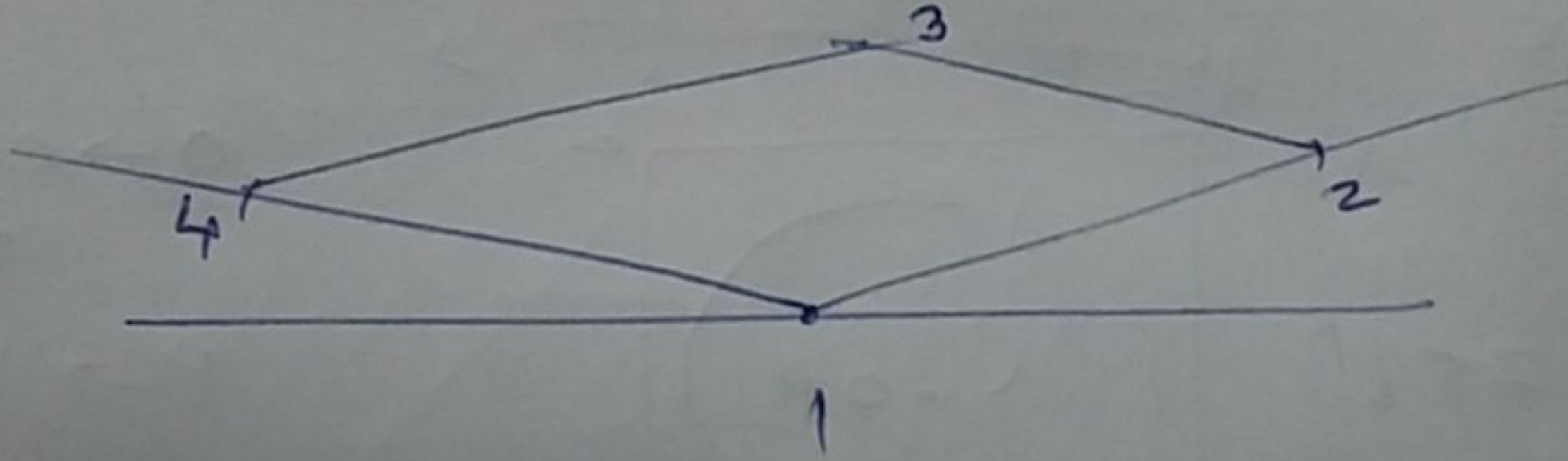


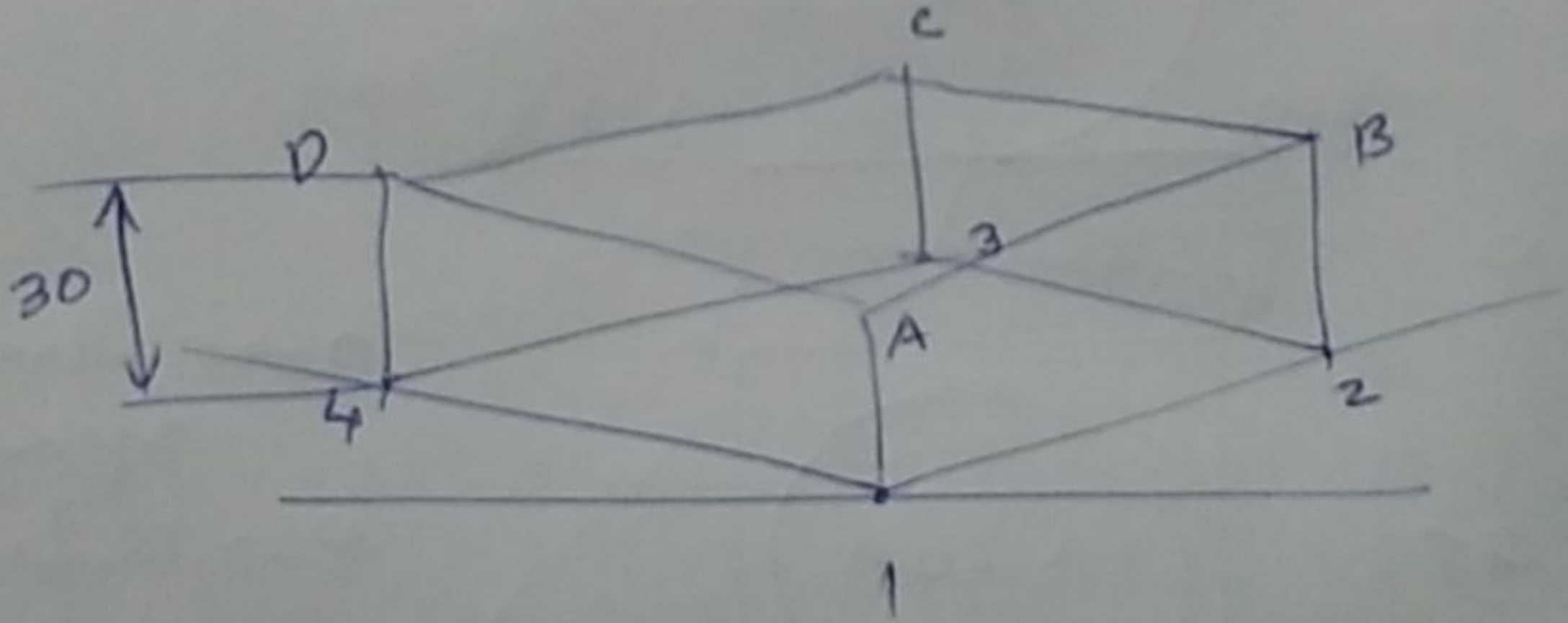
Iso. View



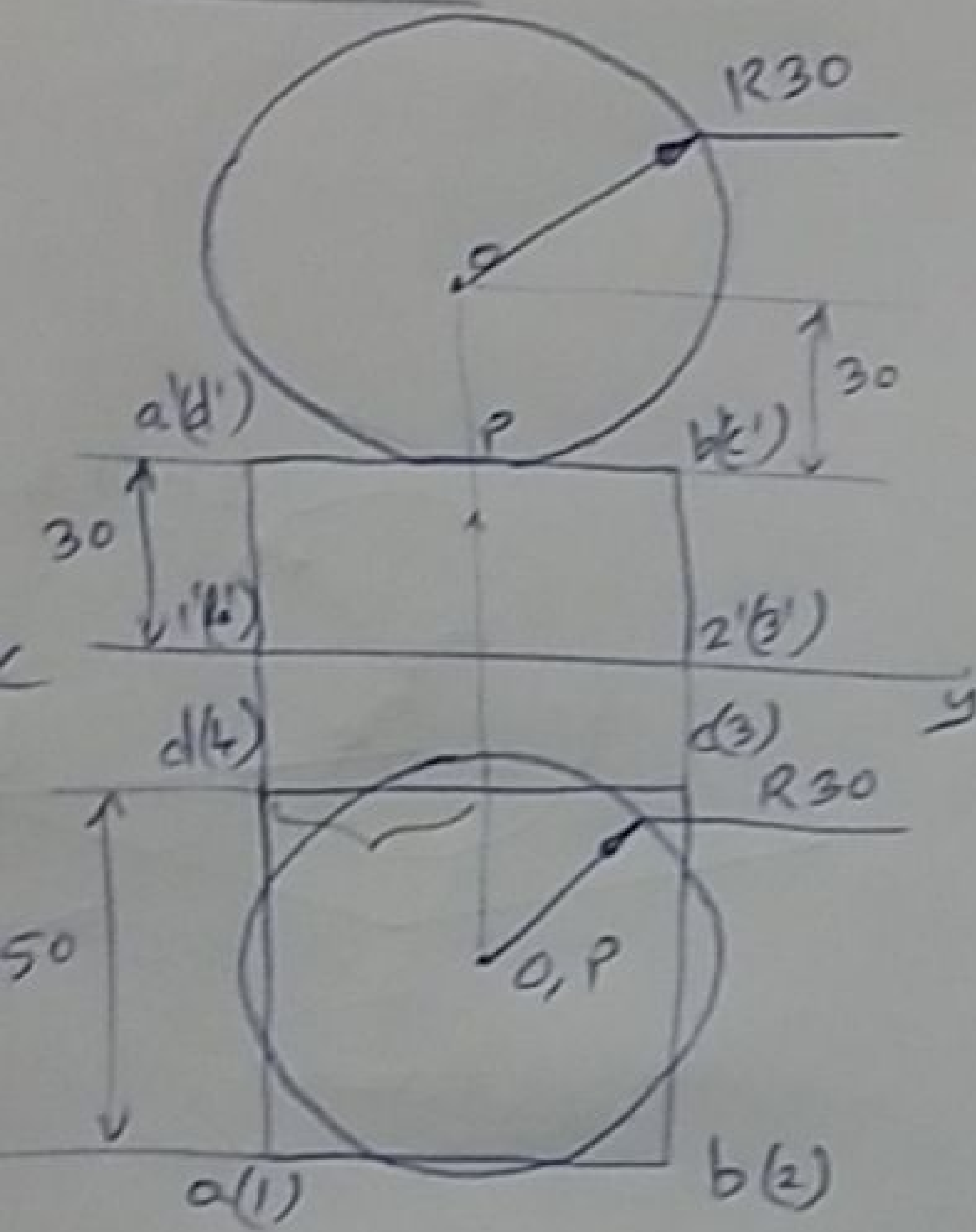
Iso. View

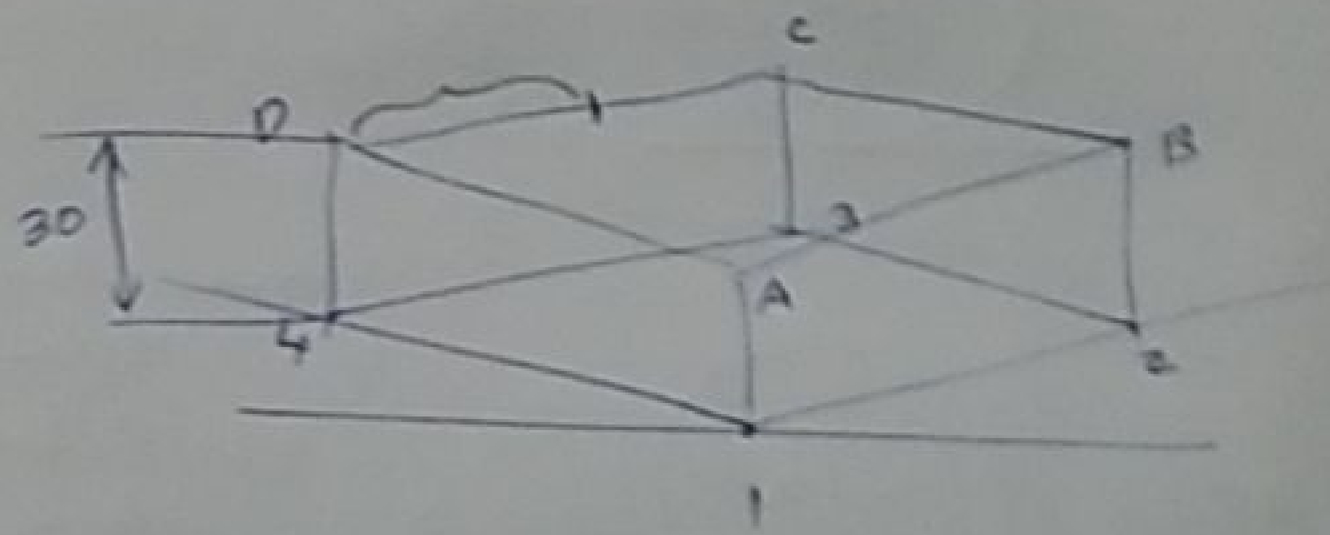



3
4
2
1

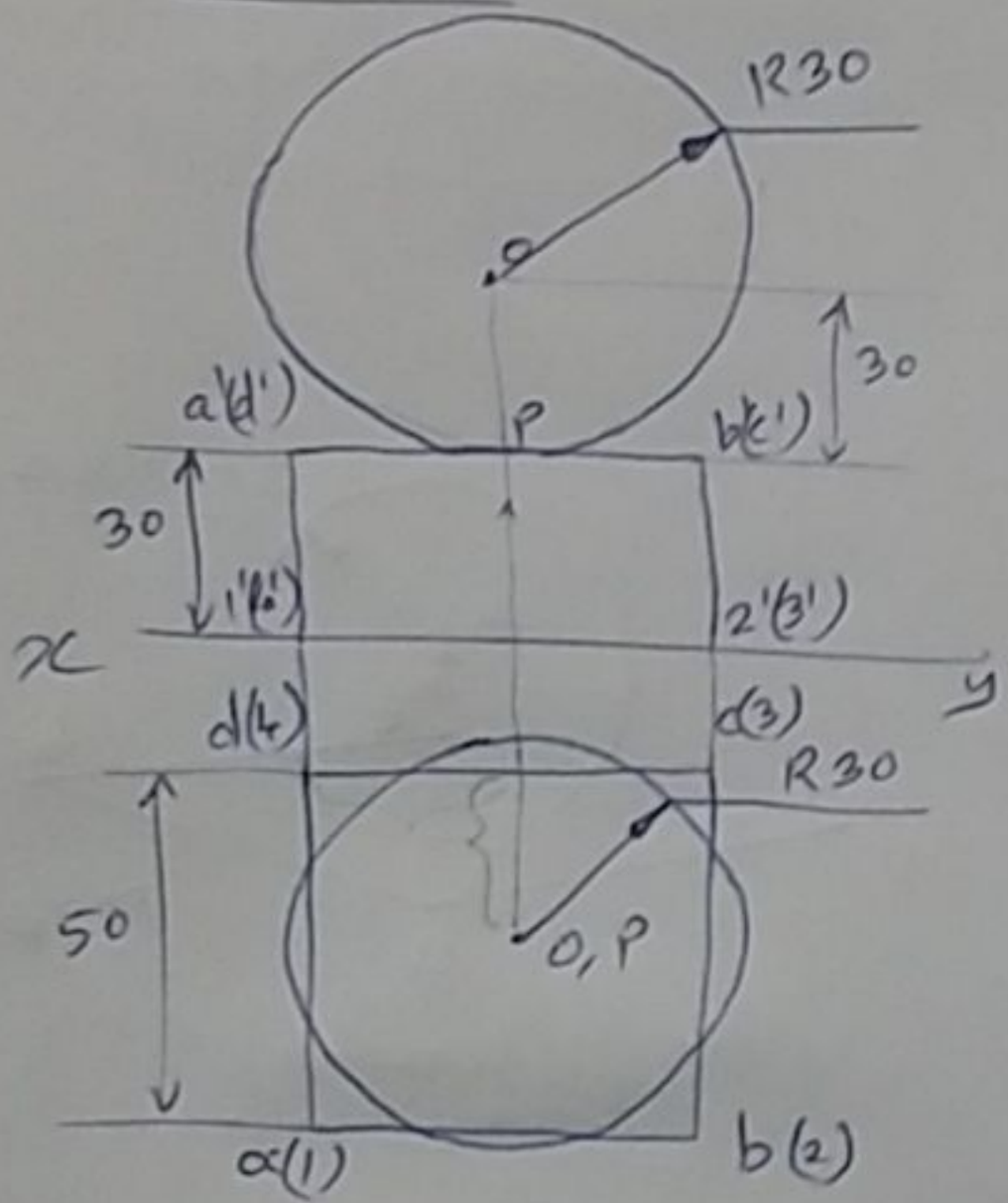

C
D
B
30
3
A
4
2
1

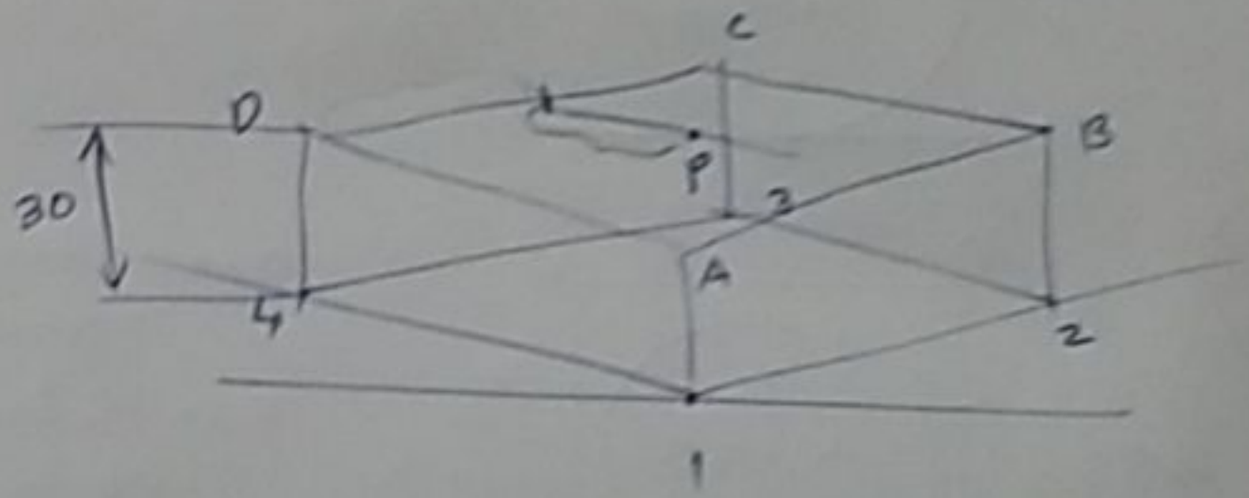
Iso. View



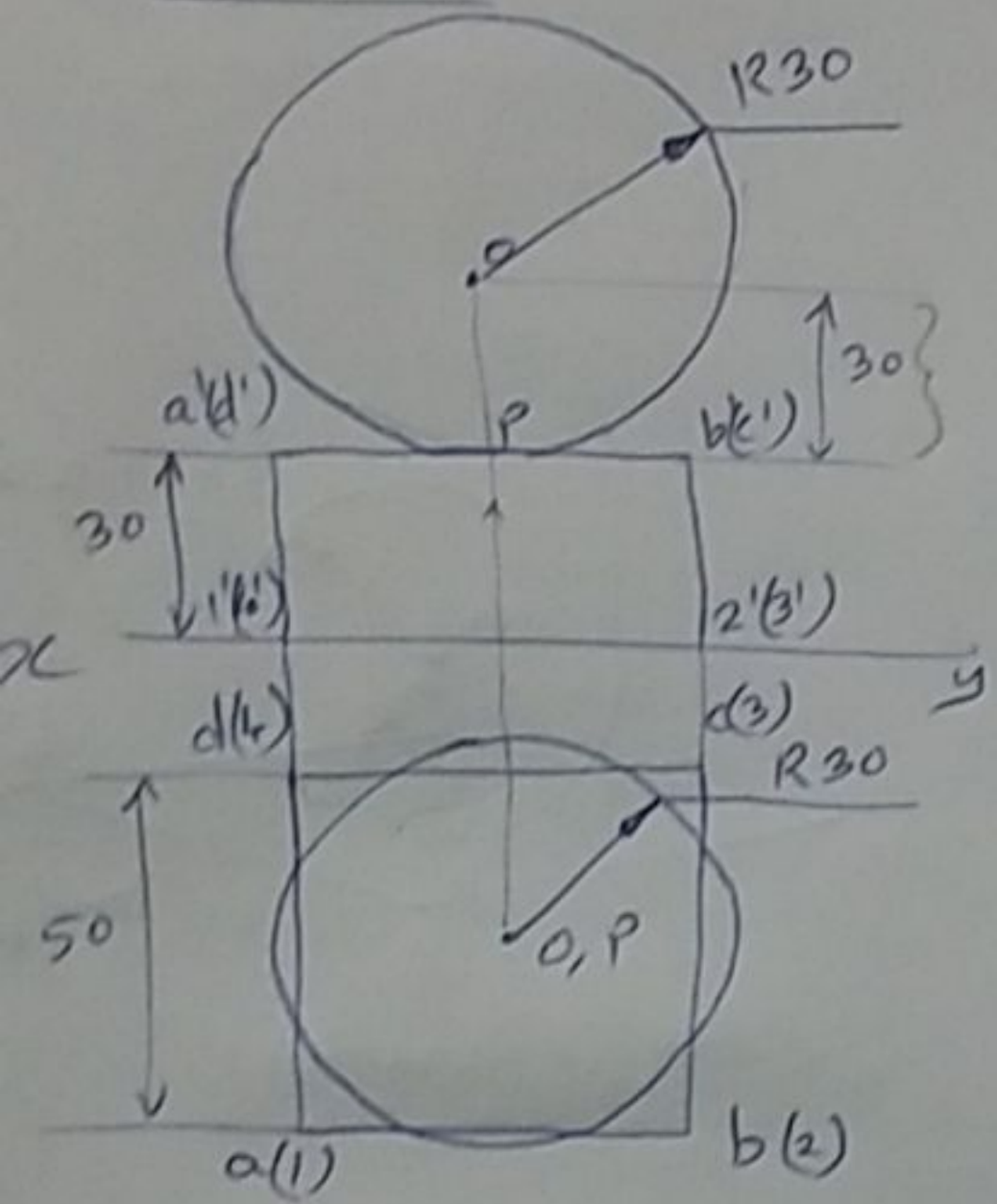


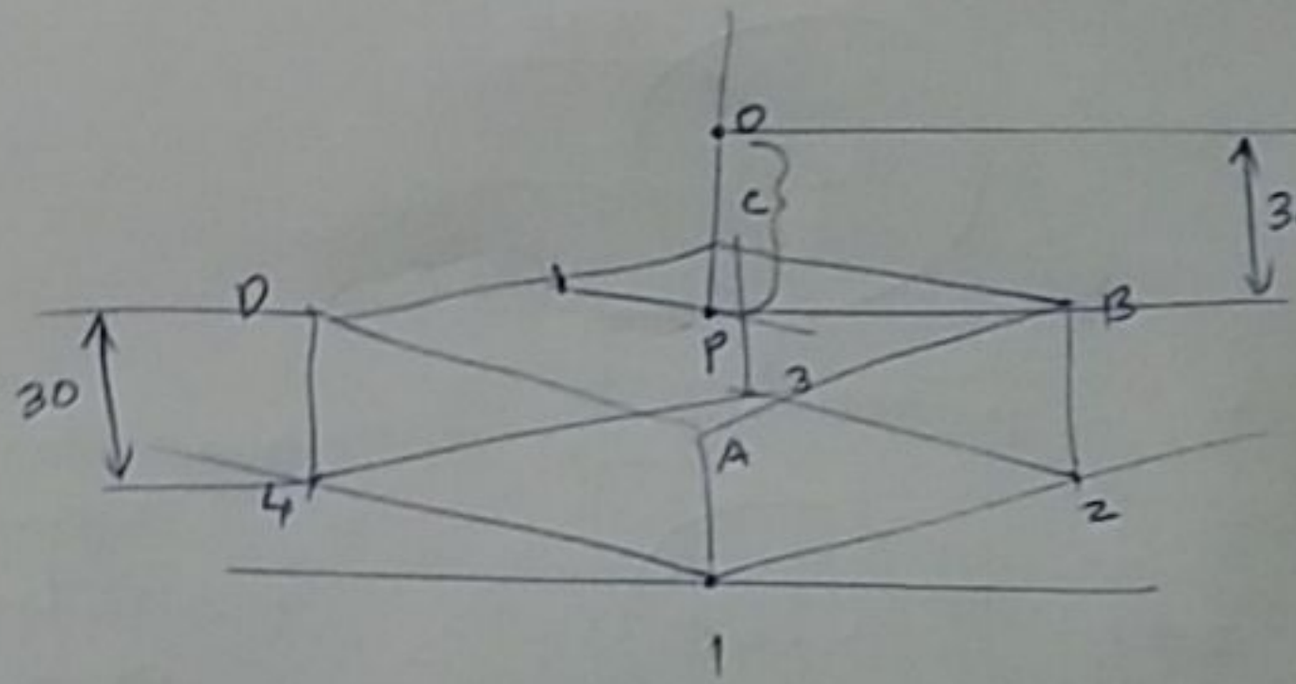
Iso. View



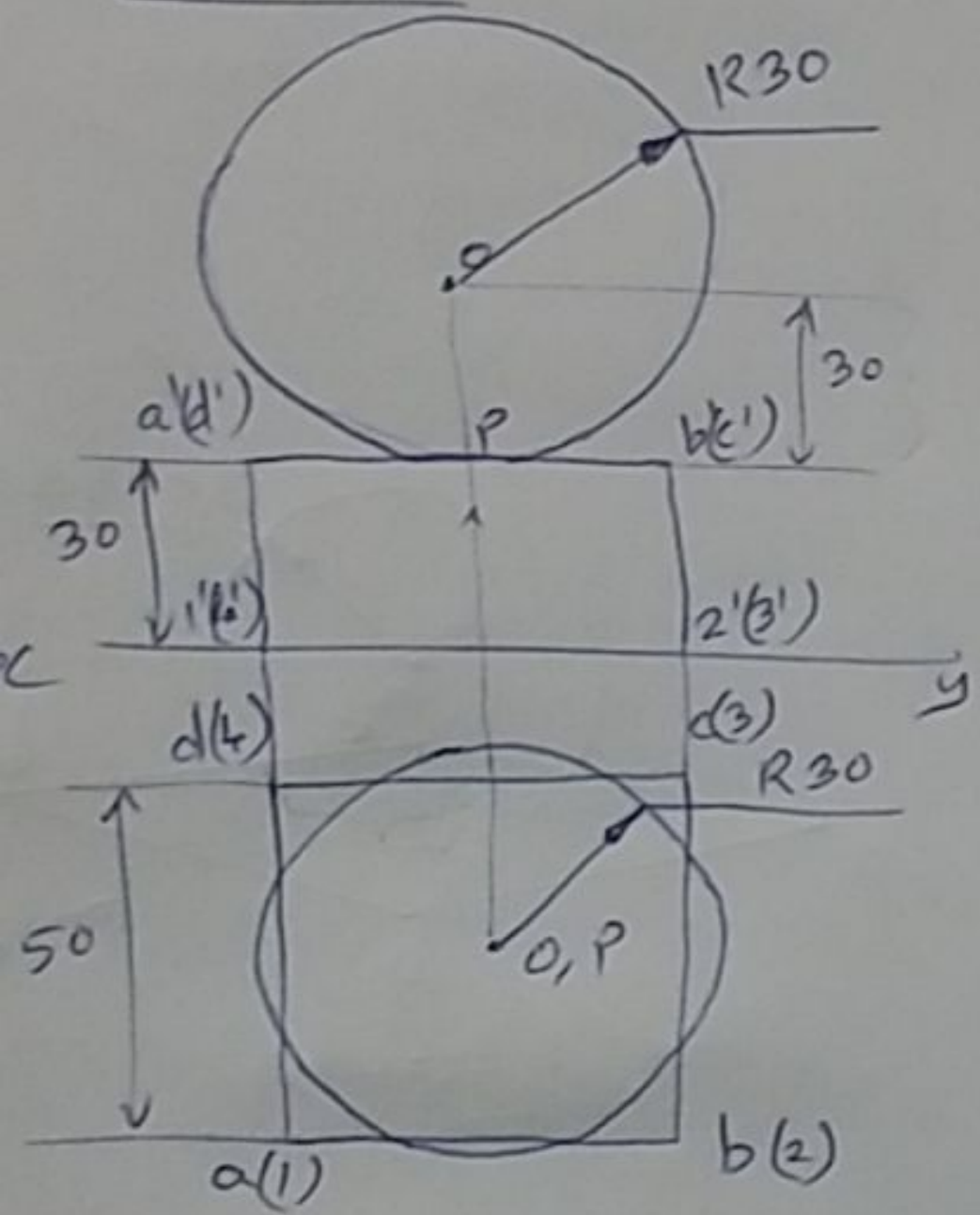


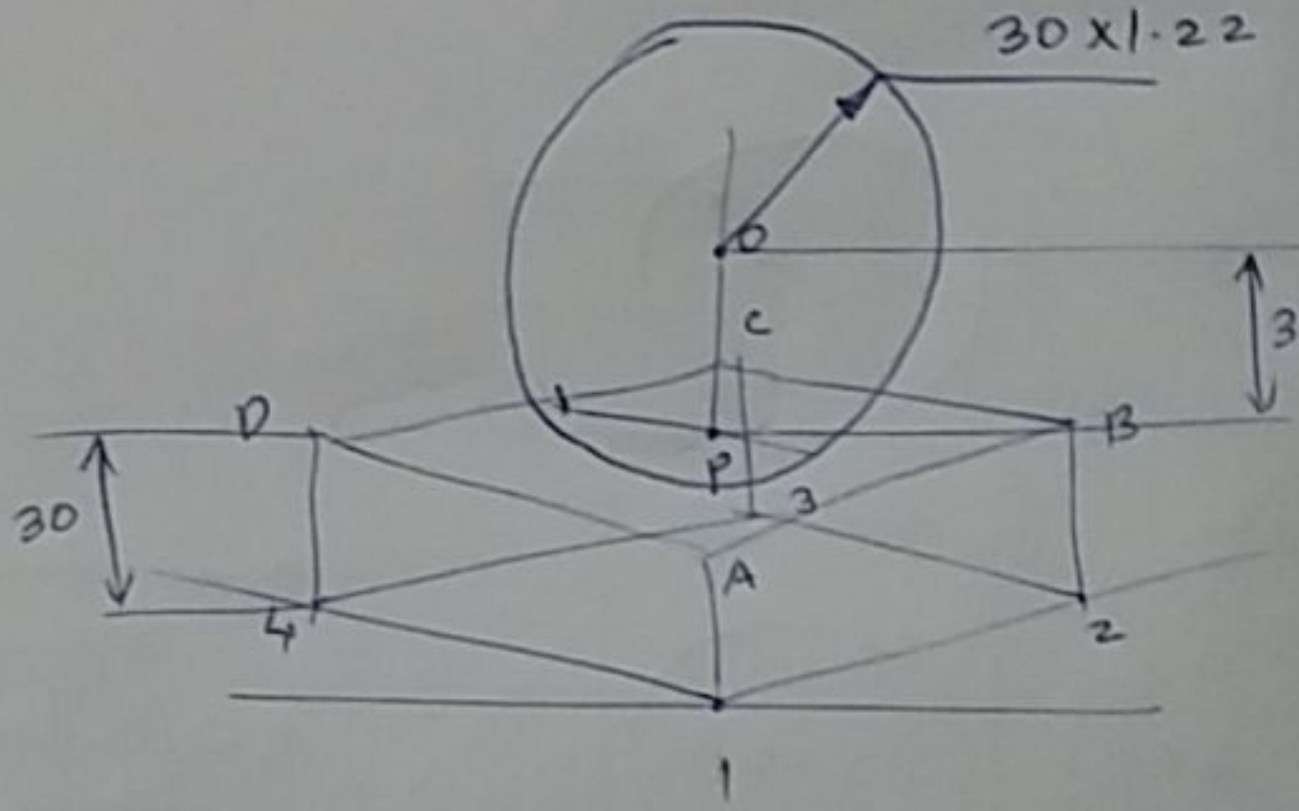
3D. View



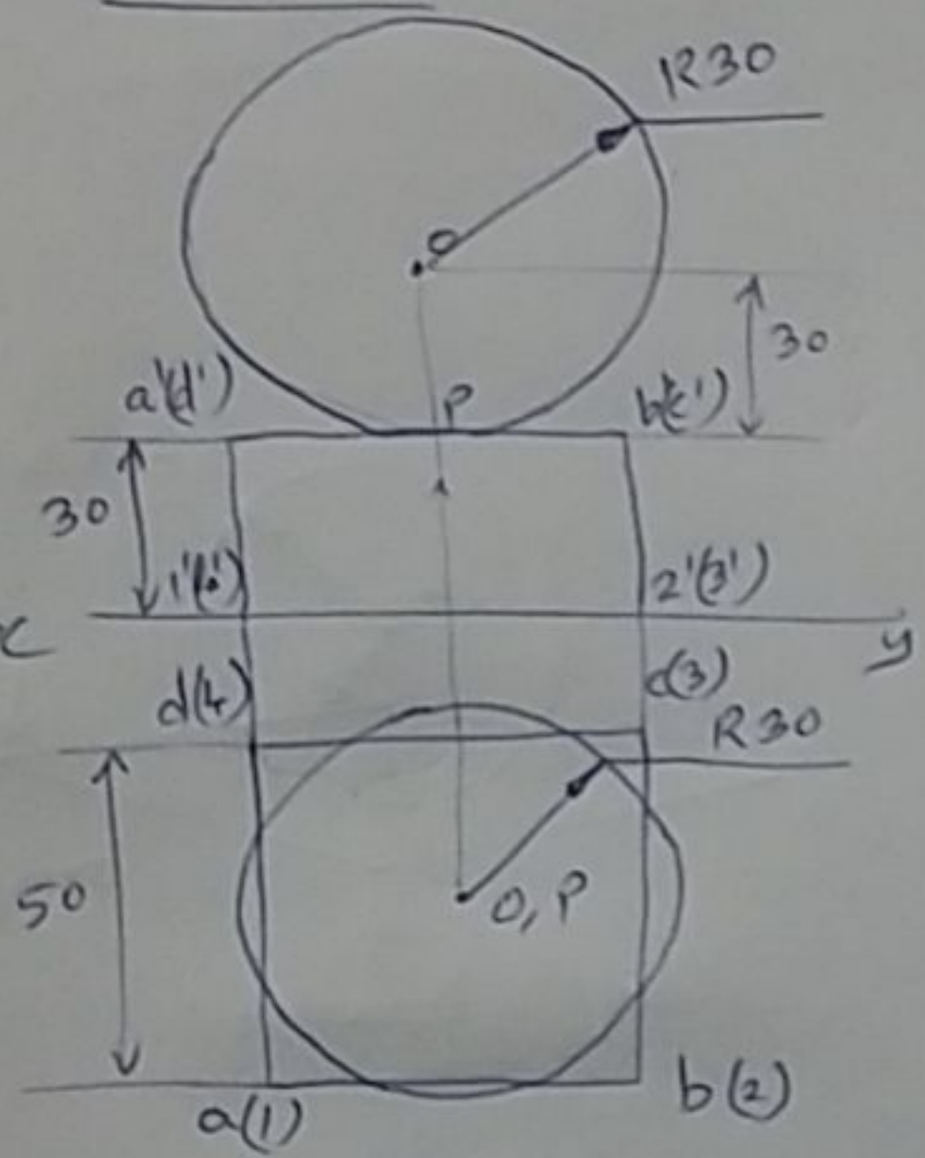


Iso. View

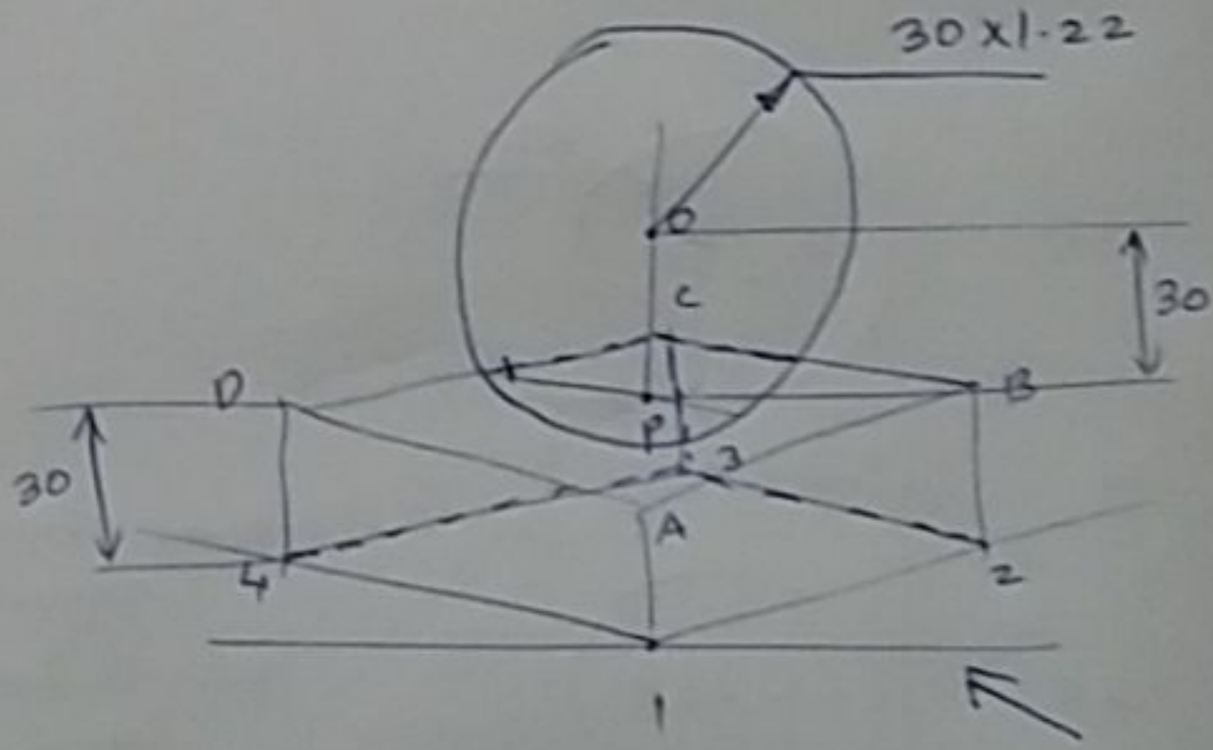

R30
a'(4')
P
b'(1')
30
30
1'(2')
2'(3')
x
y
d(4)
c(3)
R30
50
O, P
a(1)
b(2)


30 x 1.22
c
30
D
B
P
3
30
A
4
2
1

Iso. View



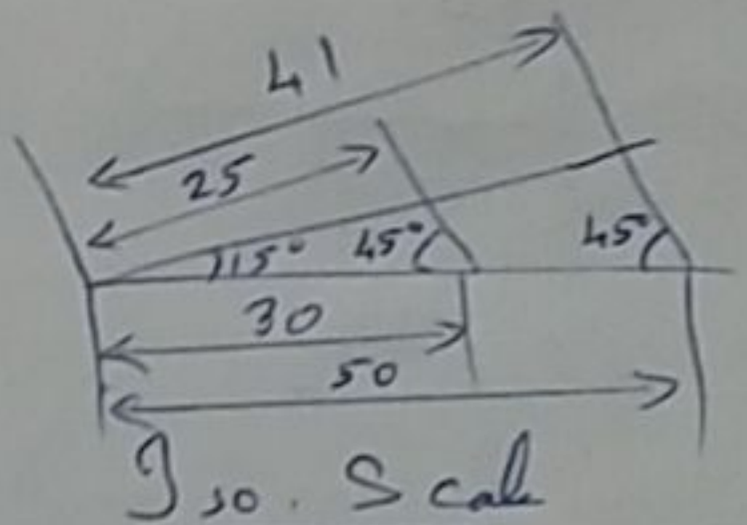
ortho. proj.



Iso. View

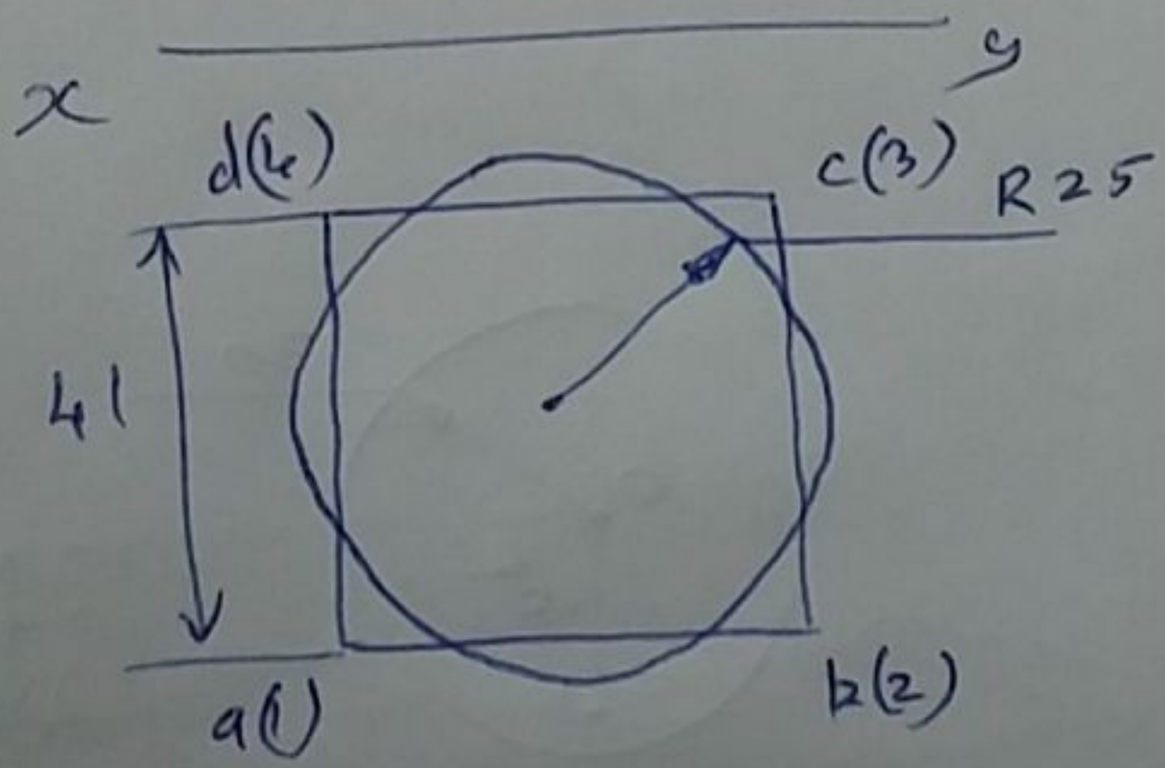
ortho. proj.

Q30. projection

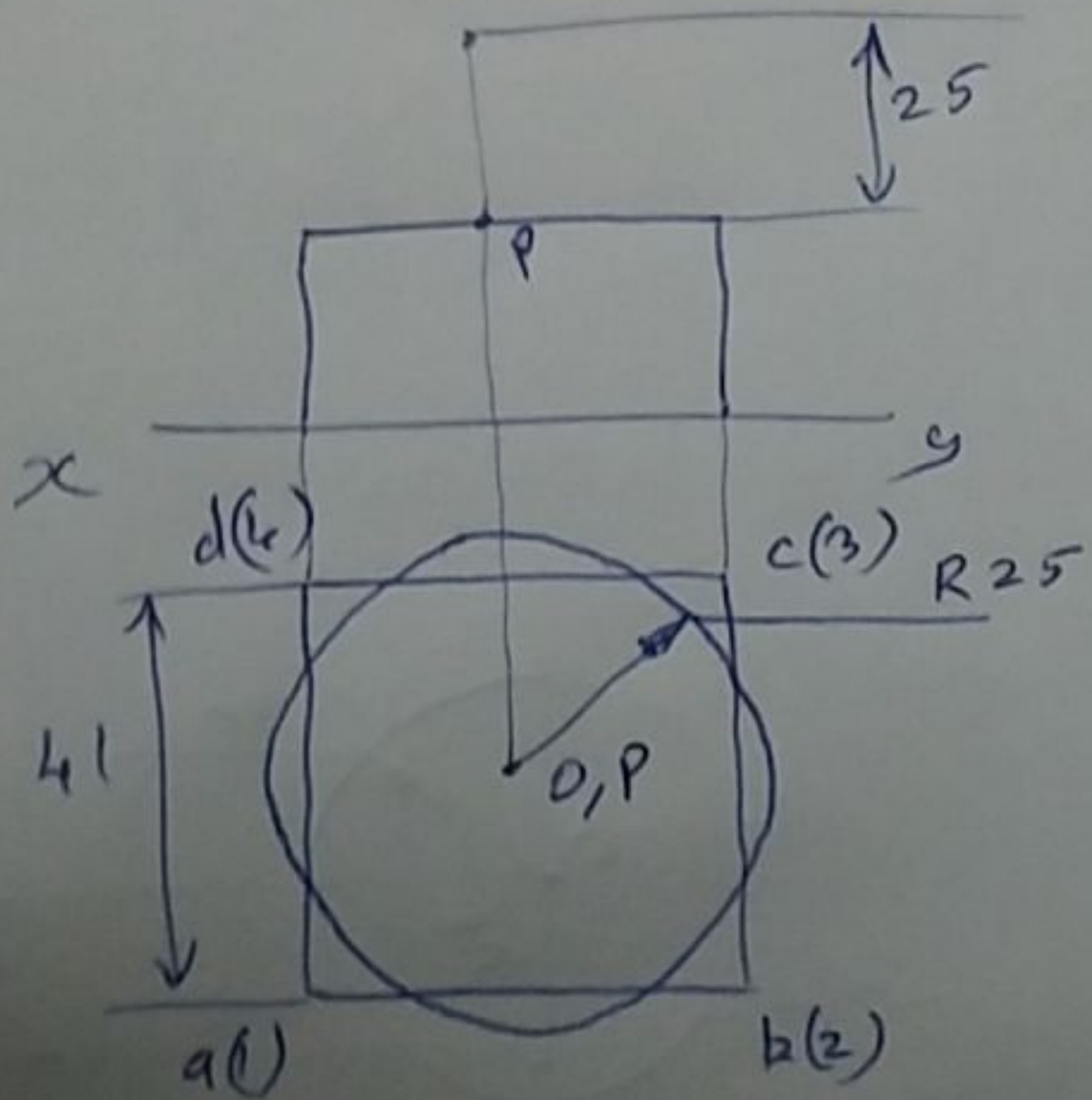


Q30. Scale

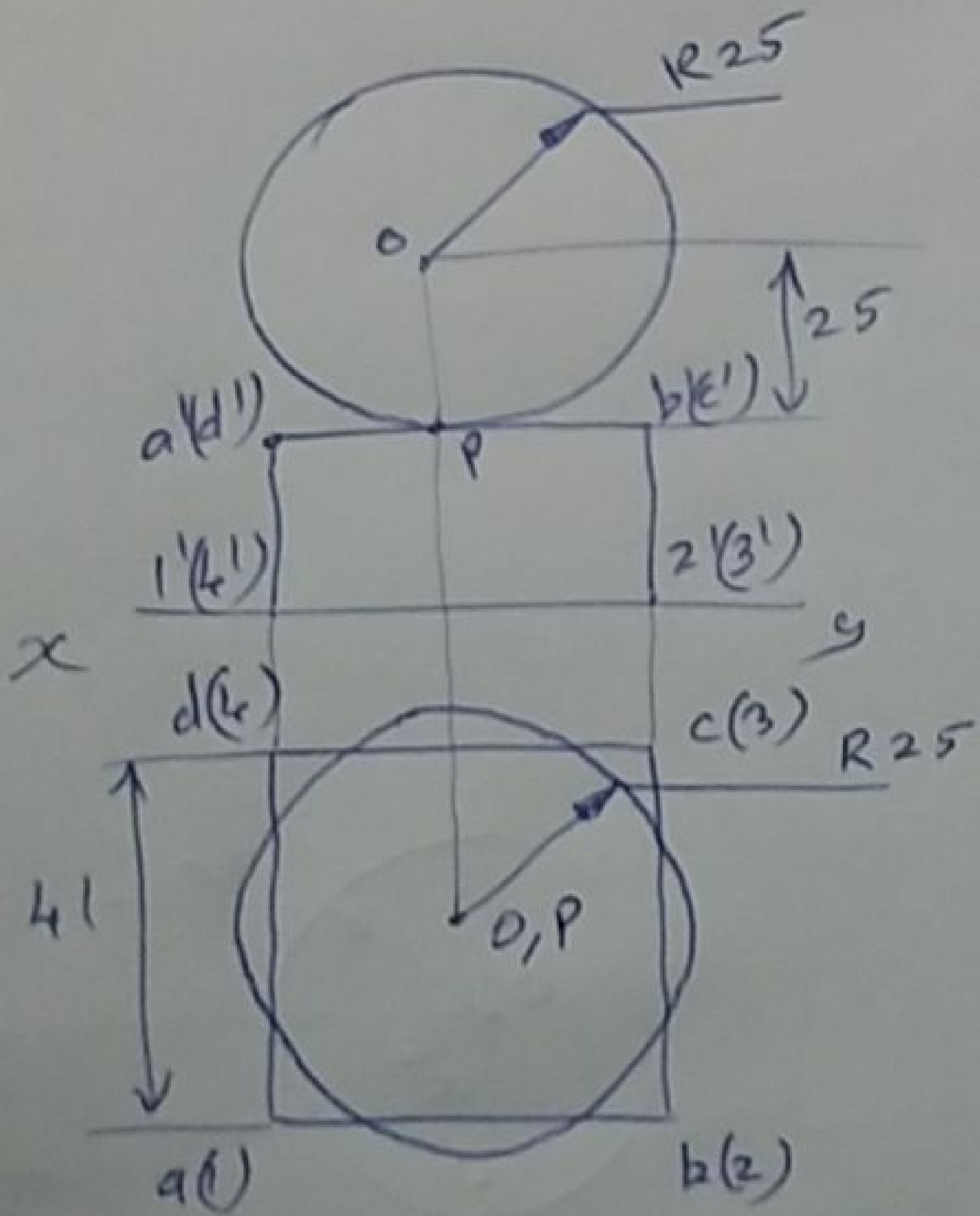
Iso. projection

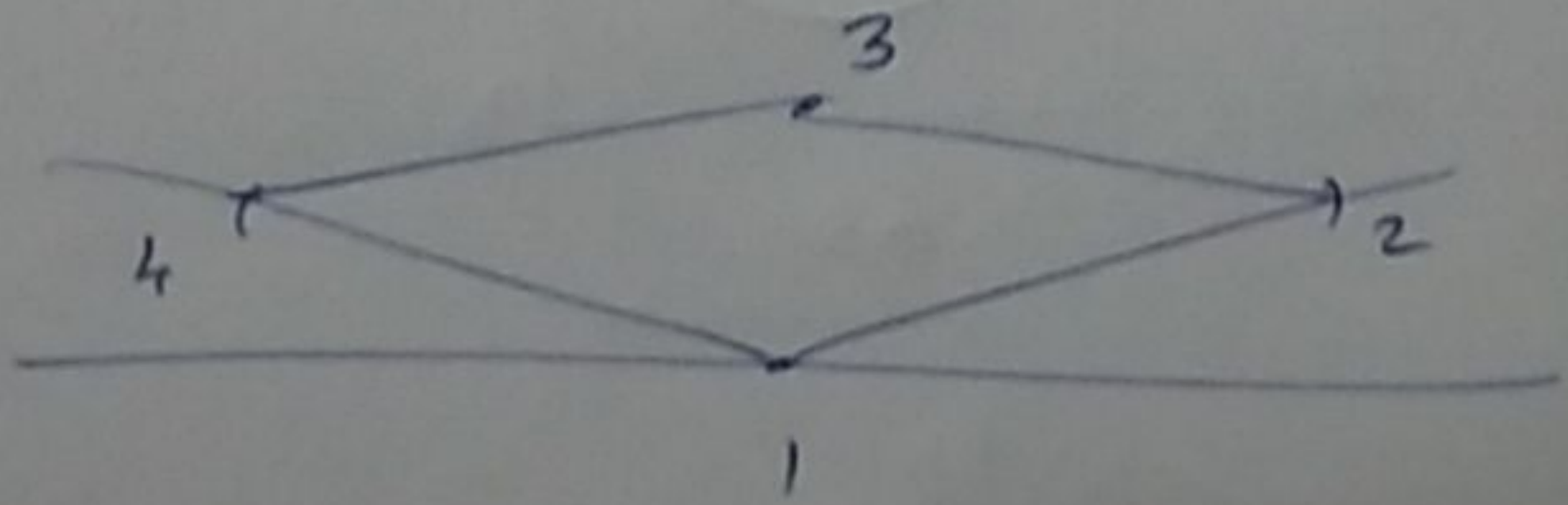


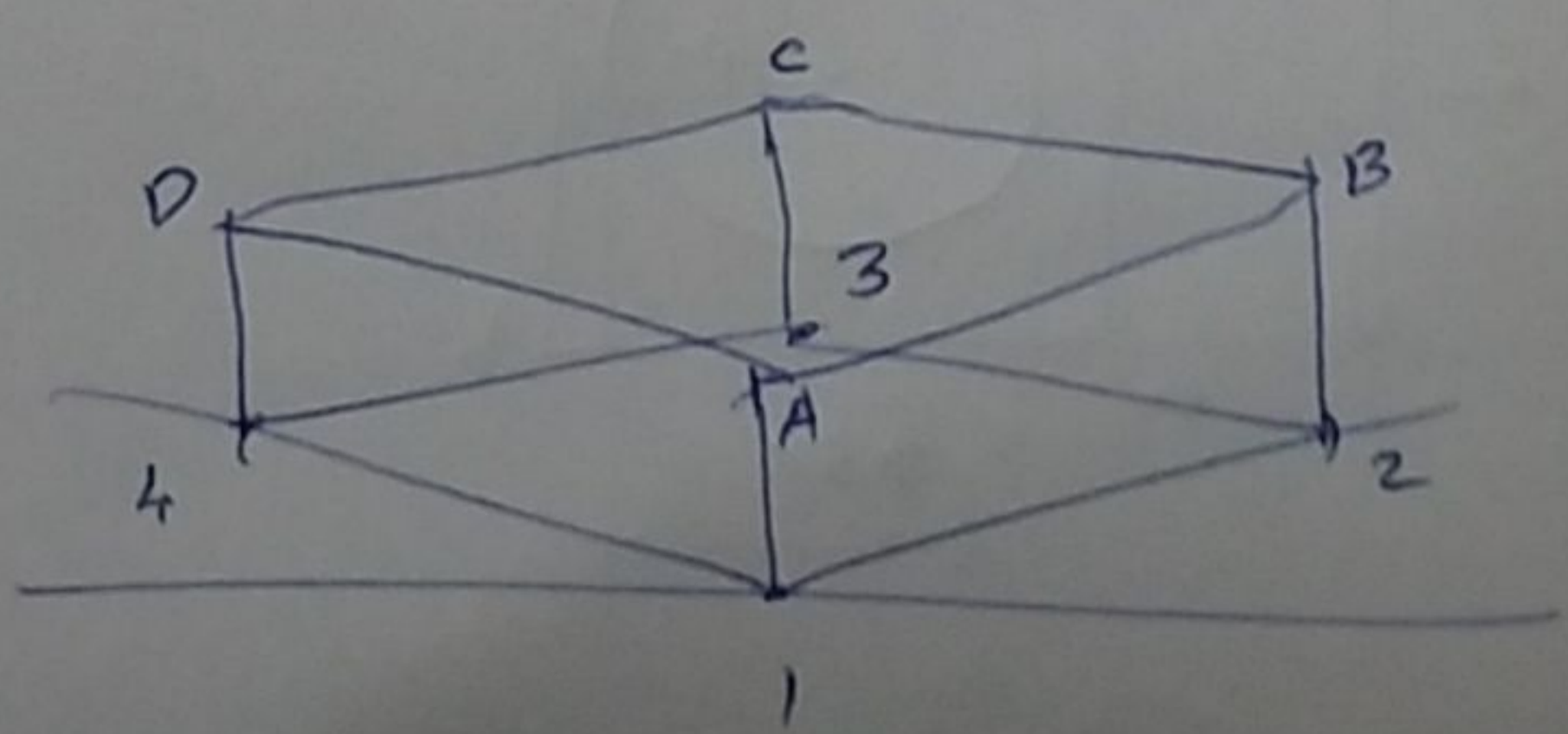
Iso. projection

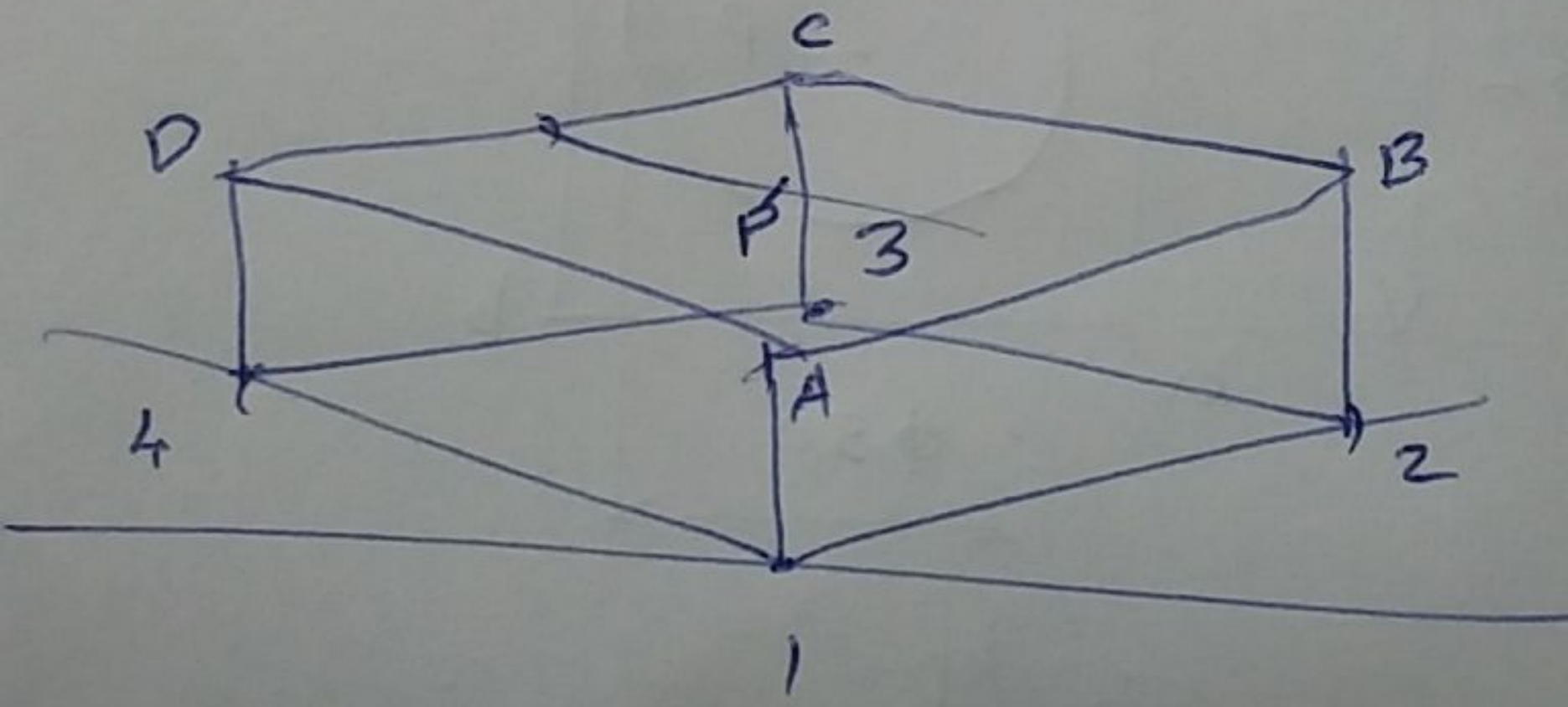


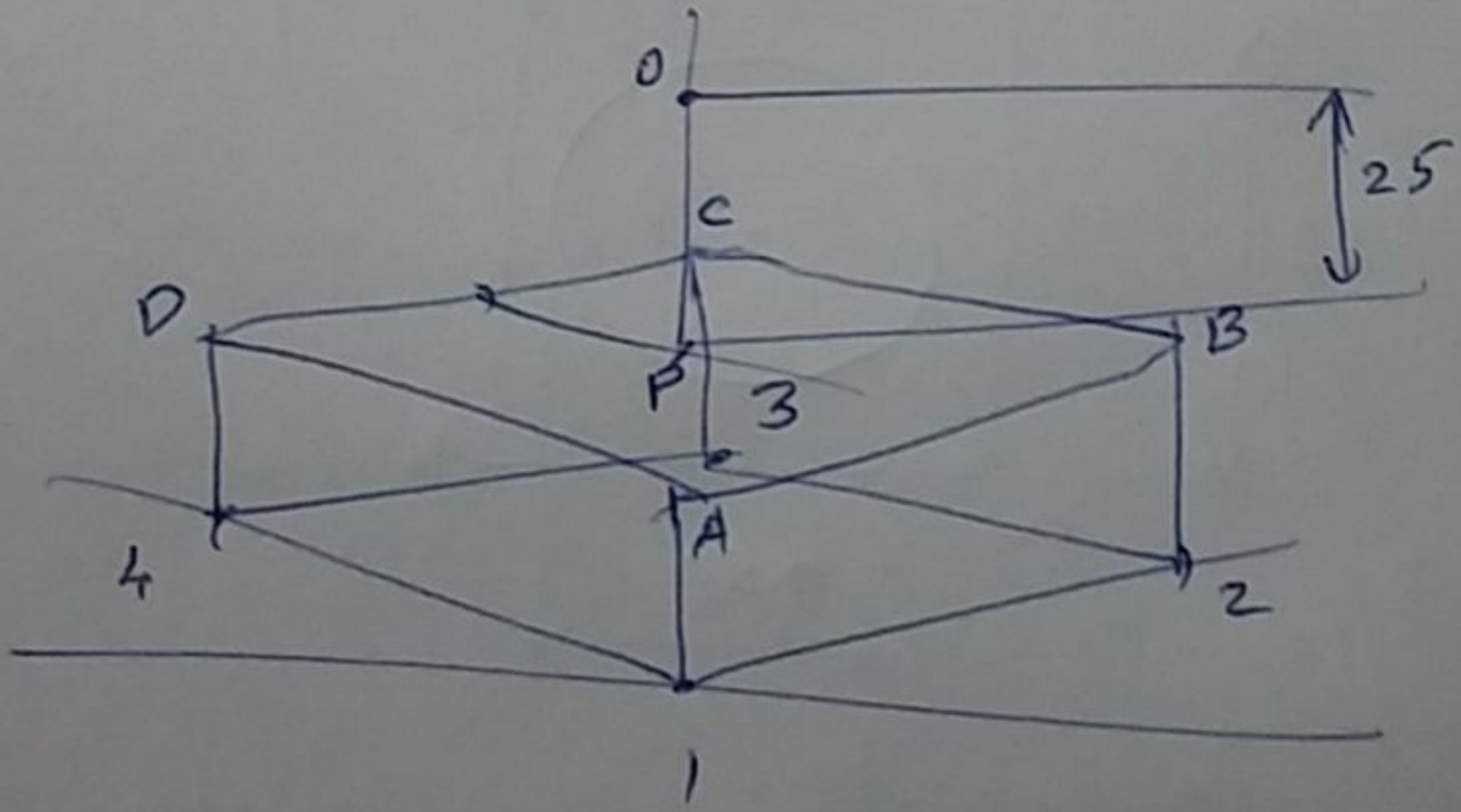
Iso. projection

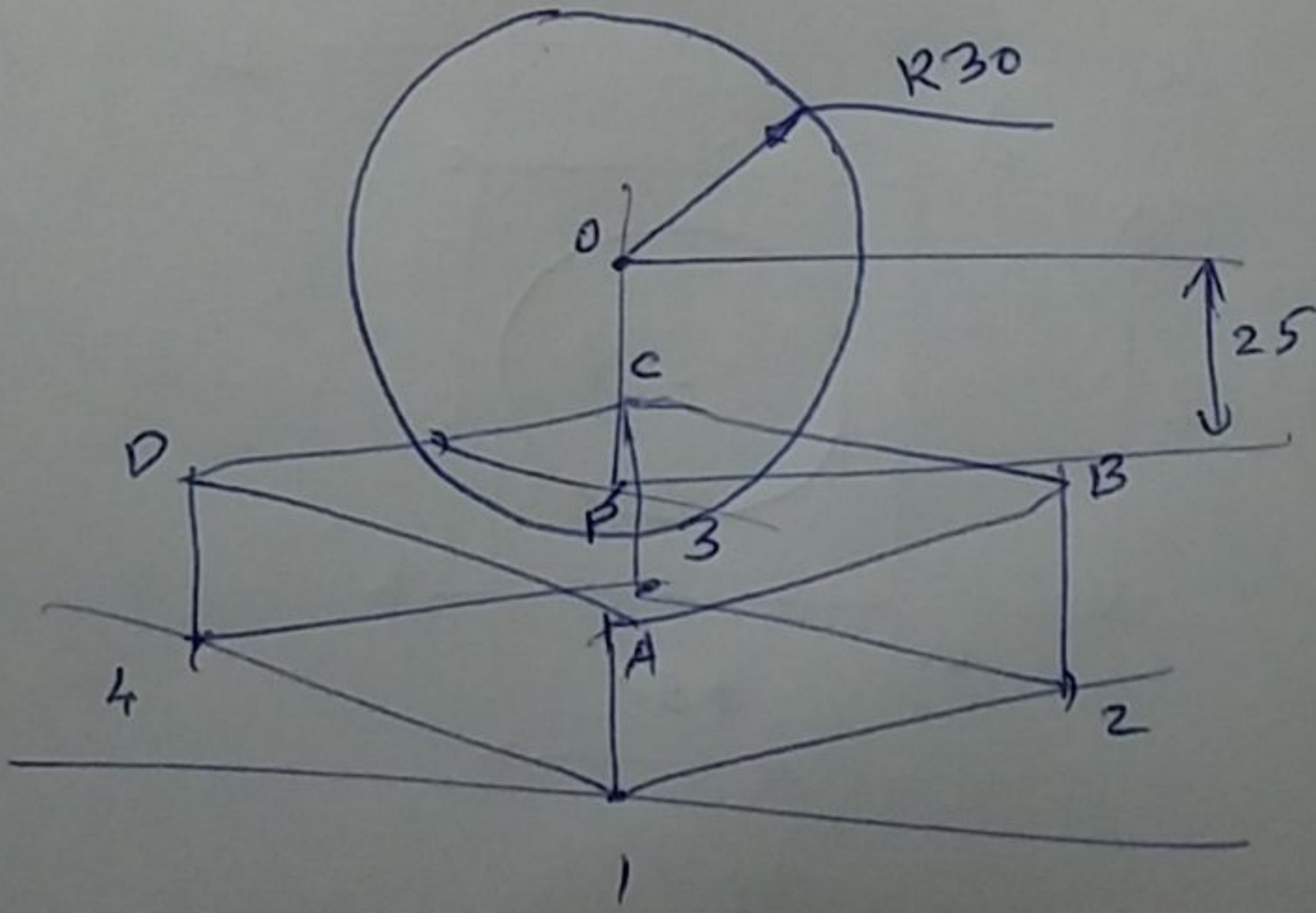



3
4
2
1


C
D
B
3
A
4
2
1

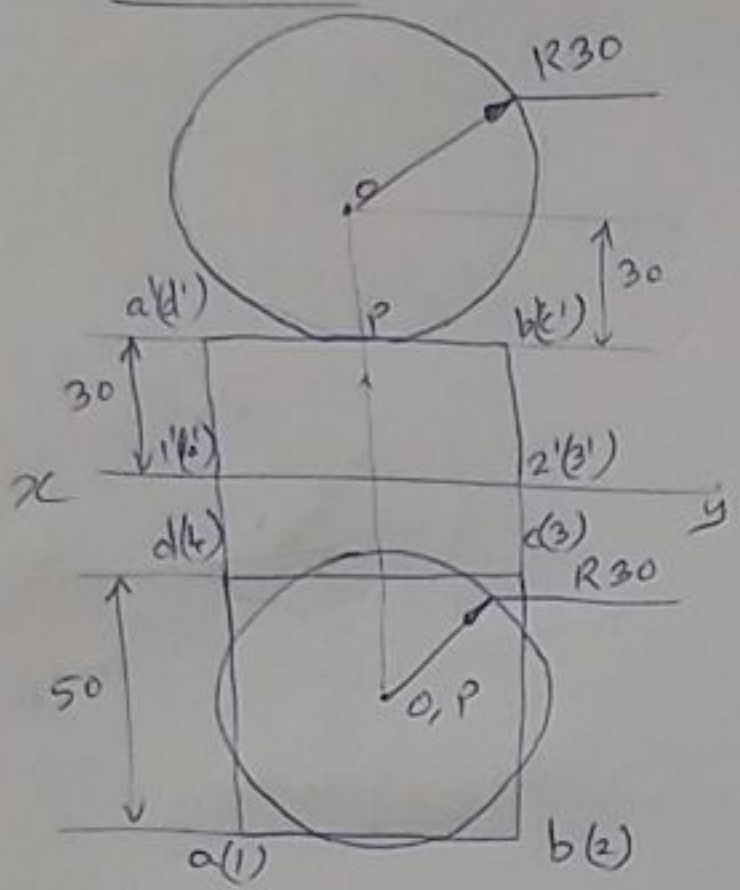

C
D
B
P
3
A
4
2
1


O
C
25
D
B
P
3
A
4
2
1


R30
O
C
25
D
B
P
3
A
4
2
1

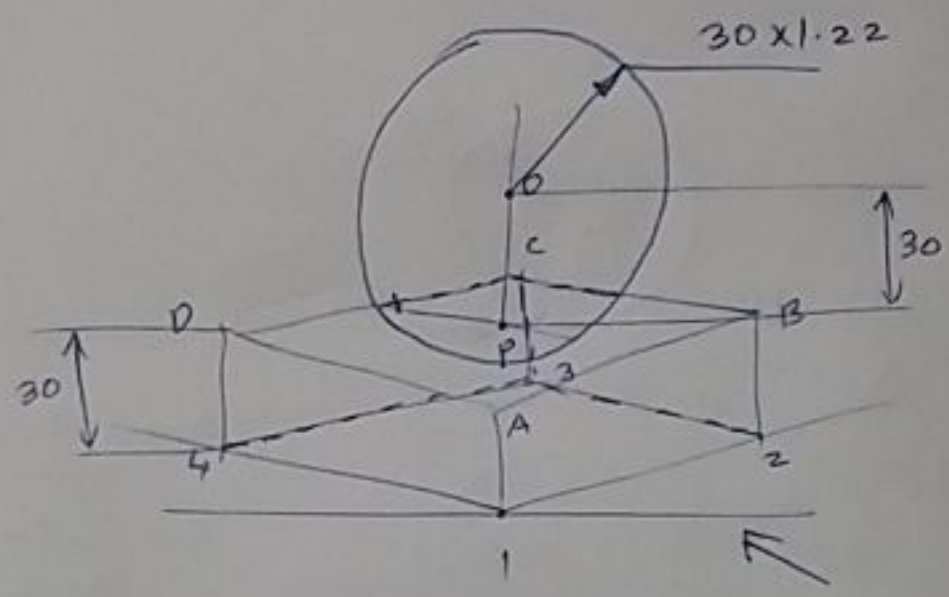
Draw the iso. view & iso. proj. of a sphere dia. 60mm left centrally on a square prism side of base 50mm & ht 30mm.

Iso. View

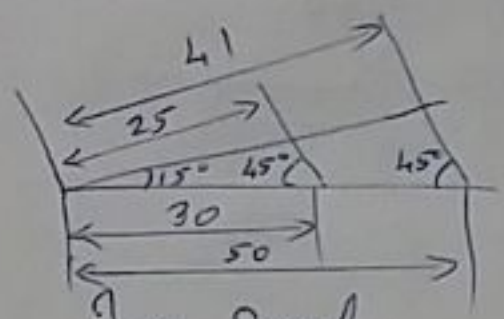


Ortho. proj.

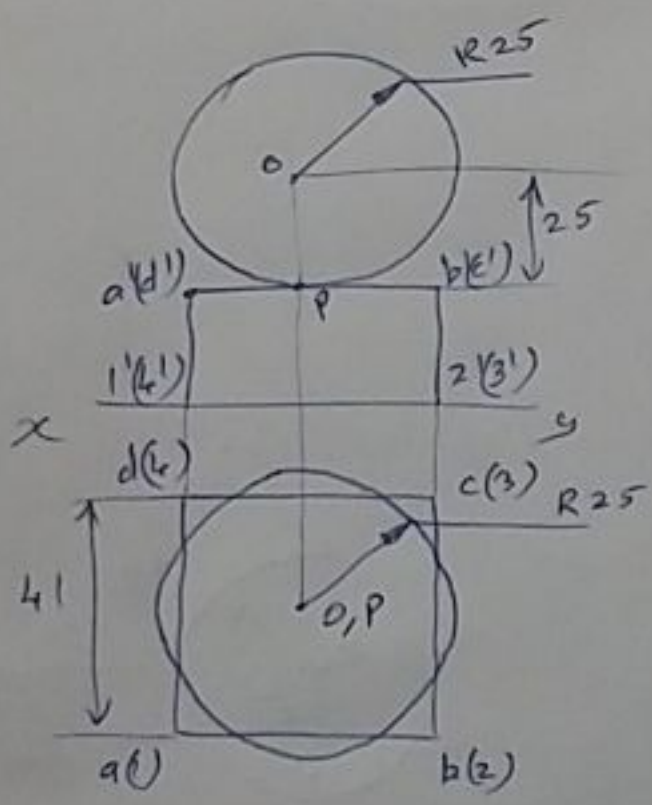
Iso. projection



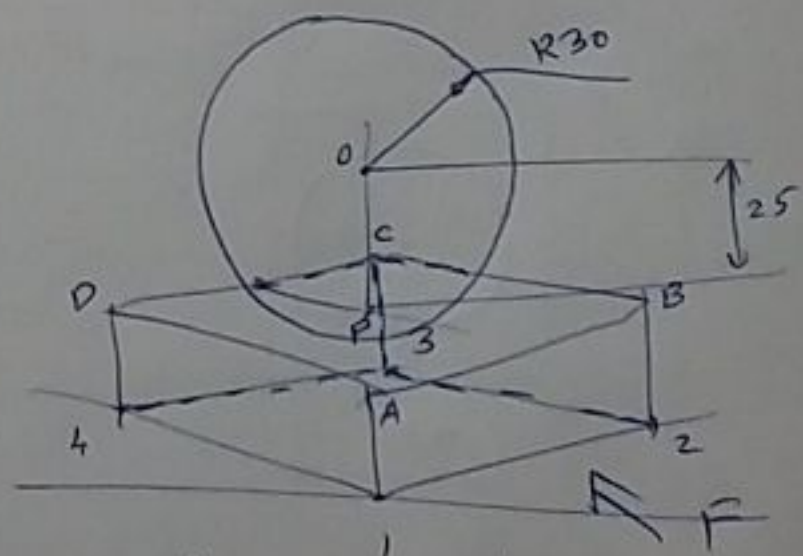
Iso. View



Iso. Scale



Ortho proj wing Iso. Scale.



Iso. projection