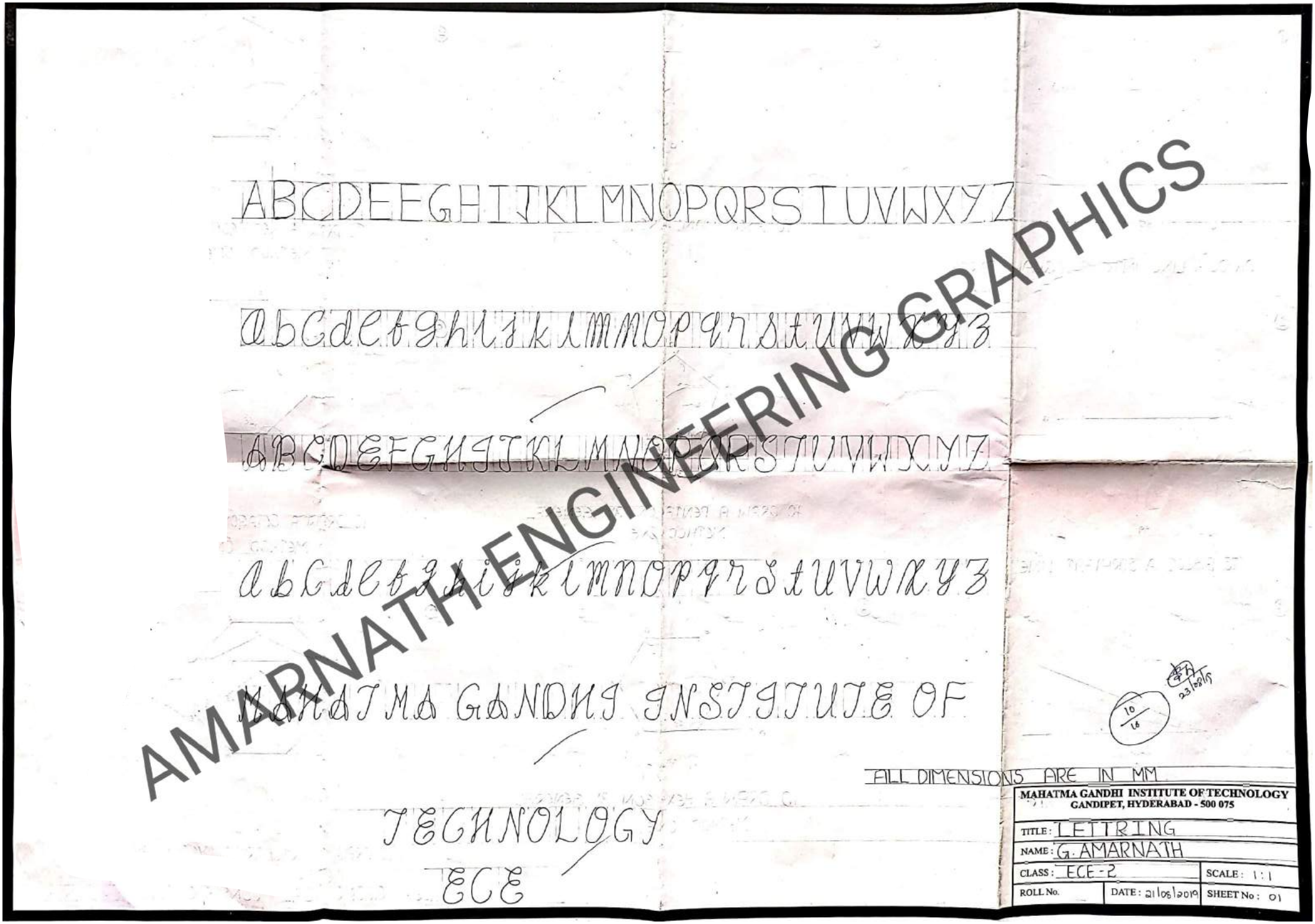
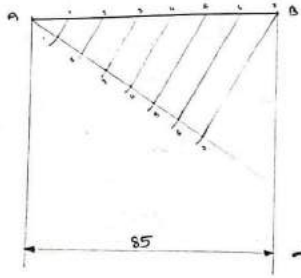
ENGINEERING GRAPHICS

2019

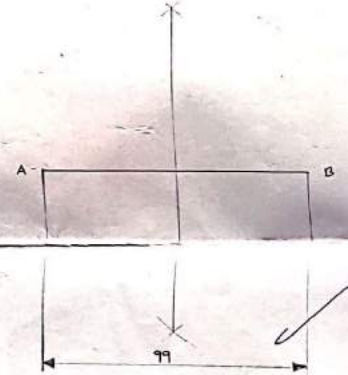


①



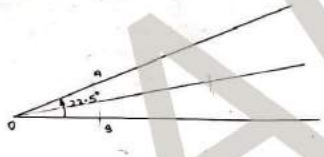
DIVIDE A LINE INTO 7 EQUAL PARTS

②



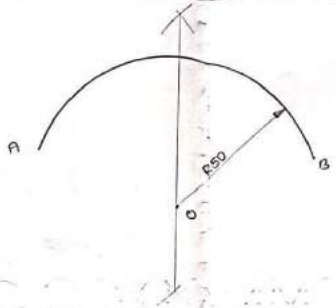
TO BISECT A STRAIGHT LINE

③



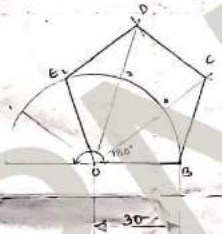
BISECTING AN ANGLE

④



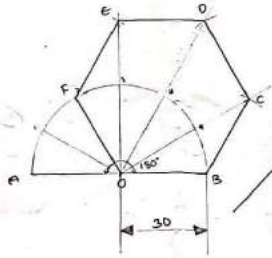
TO BISECT AN ARC.

⑤



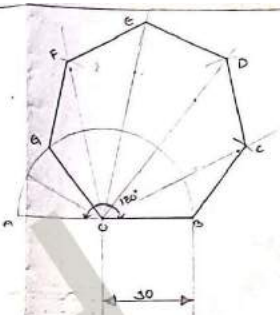
TO DRAW A PENTAGON BY GENERAL METHOD ONE

⑥



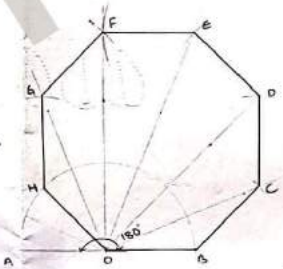
TO DRAW A HEXAGON BY GENERAL METHOD ONE

⑦



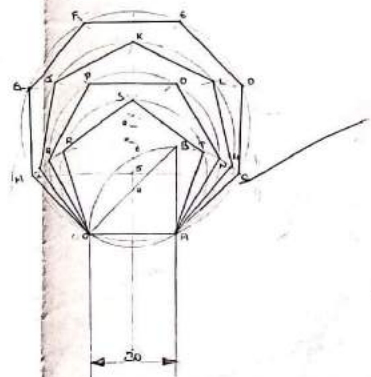
TO DRAW A HEPTAGON BY GENERAL METHOD ONE

⑧



TO DRAW A OCTAGON BY GENERAL METHOD ONE

⑨



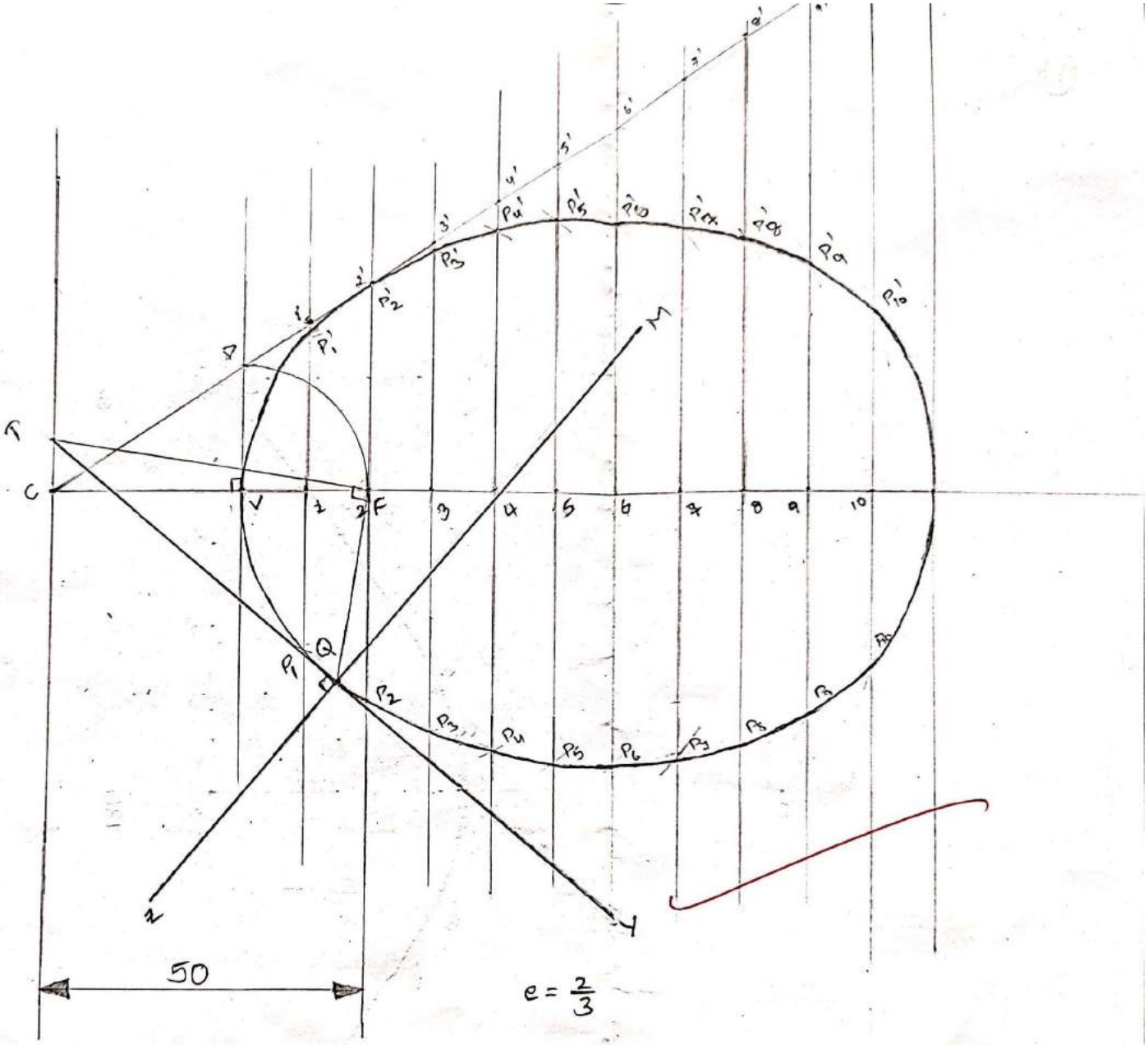
TO DRAW A RGULAR POLYGON BY GENERAL METHOD TWO

TITLE: GEOMETRICAL CONSTRUCTION.

(40)

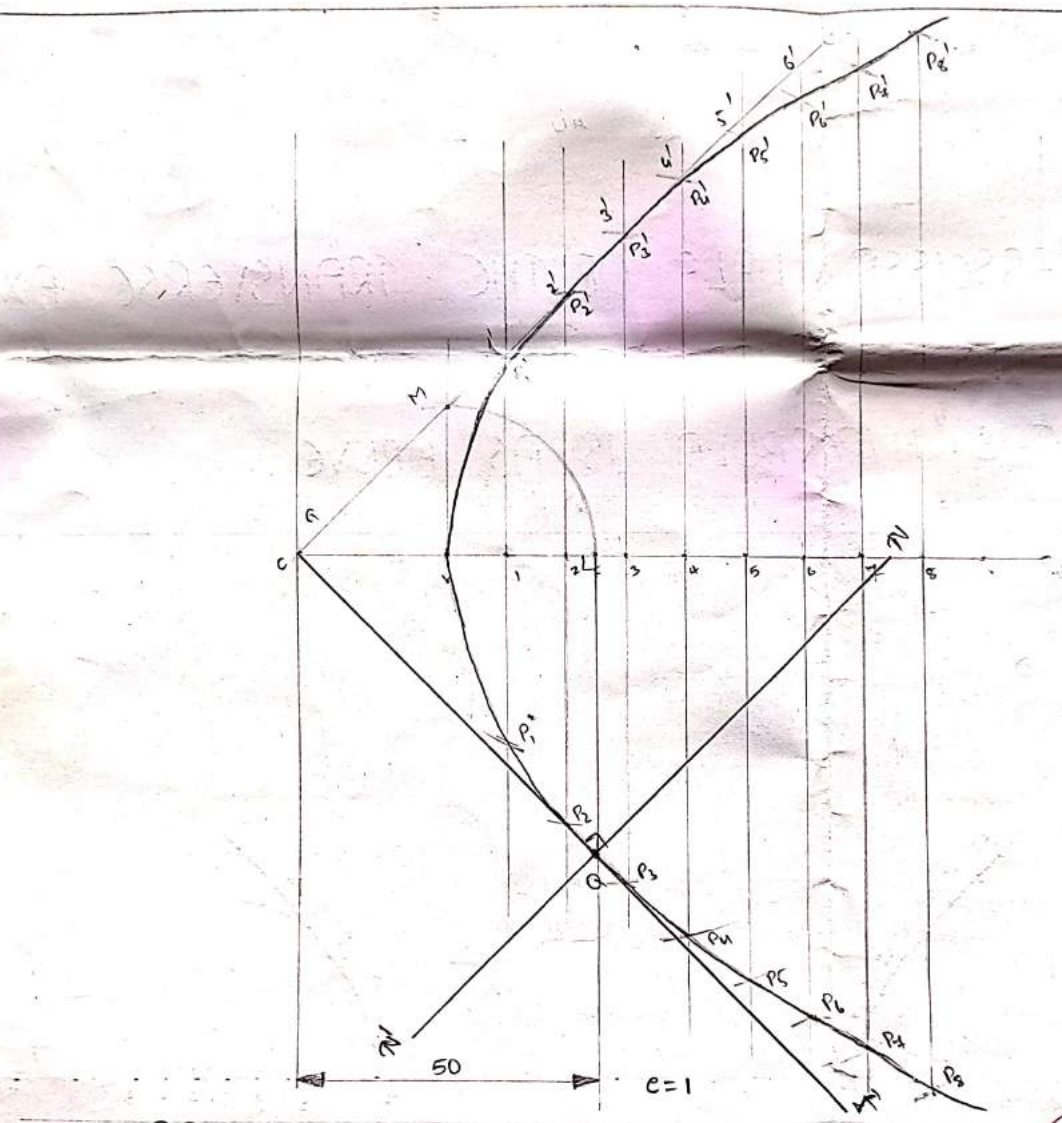
23/08/19

(1)

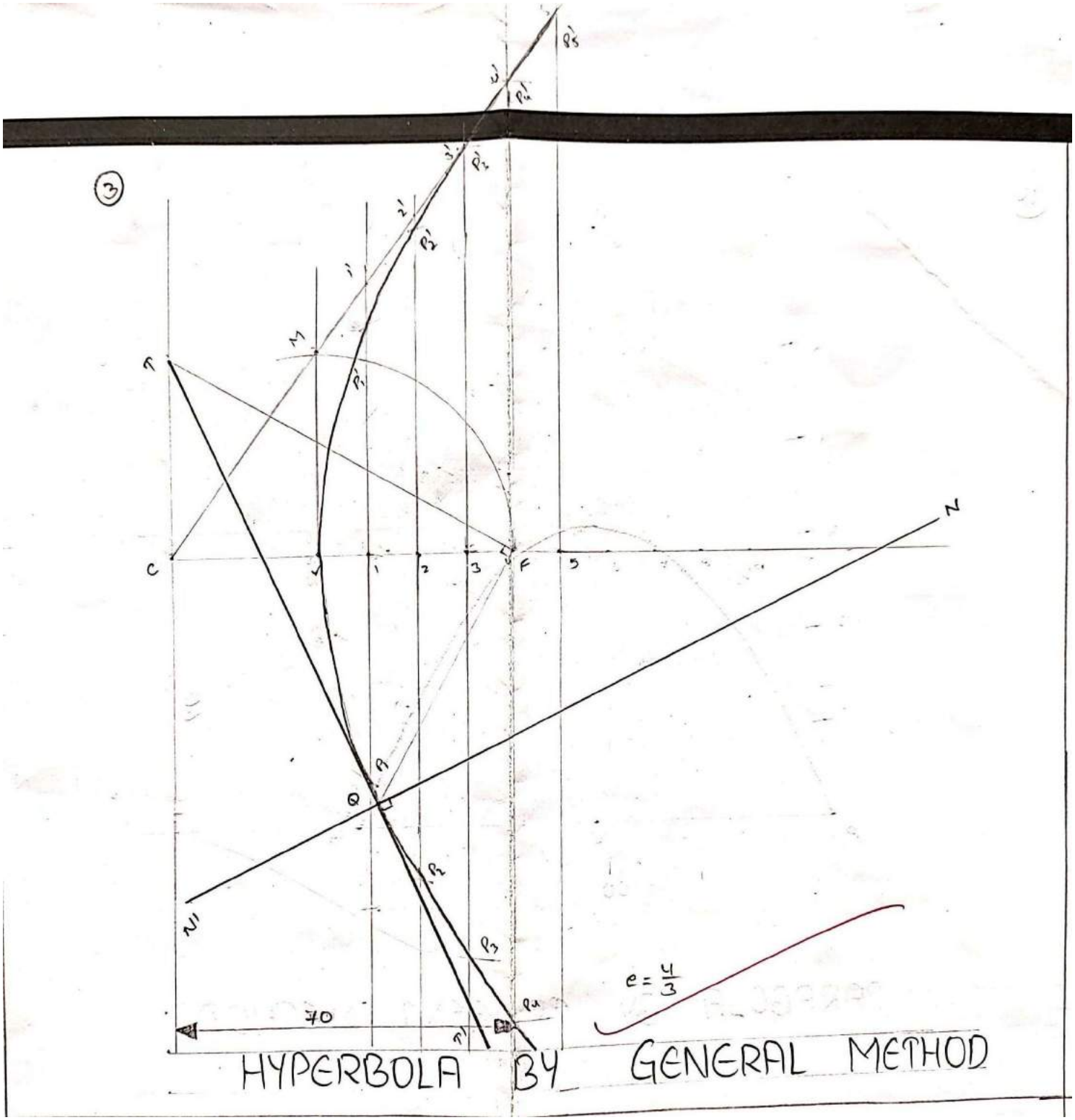


ELLIPSE BY GENERAL METHOD.

(2)

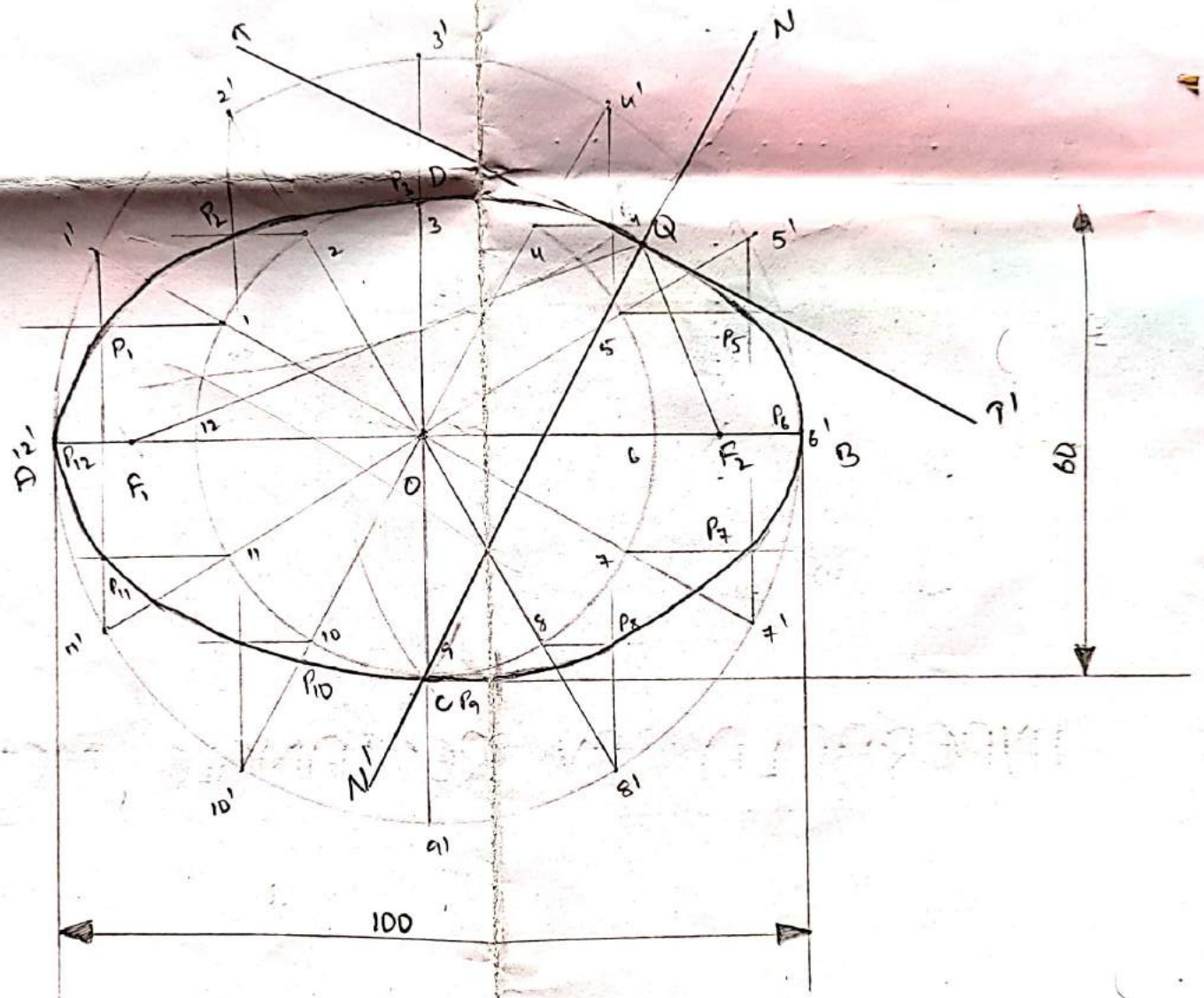


PARABOLA BY GENERAL METHOD



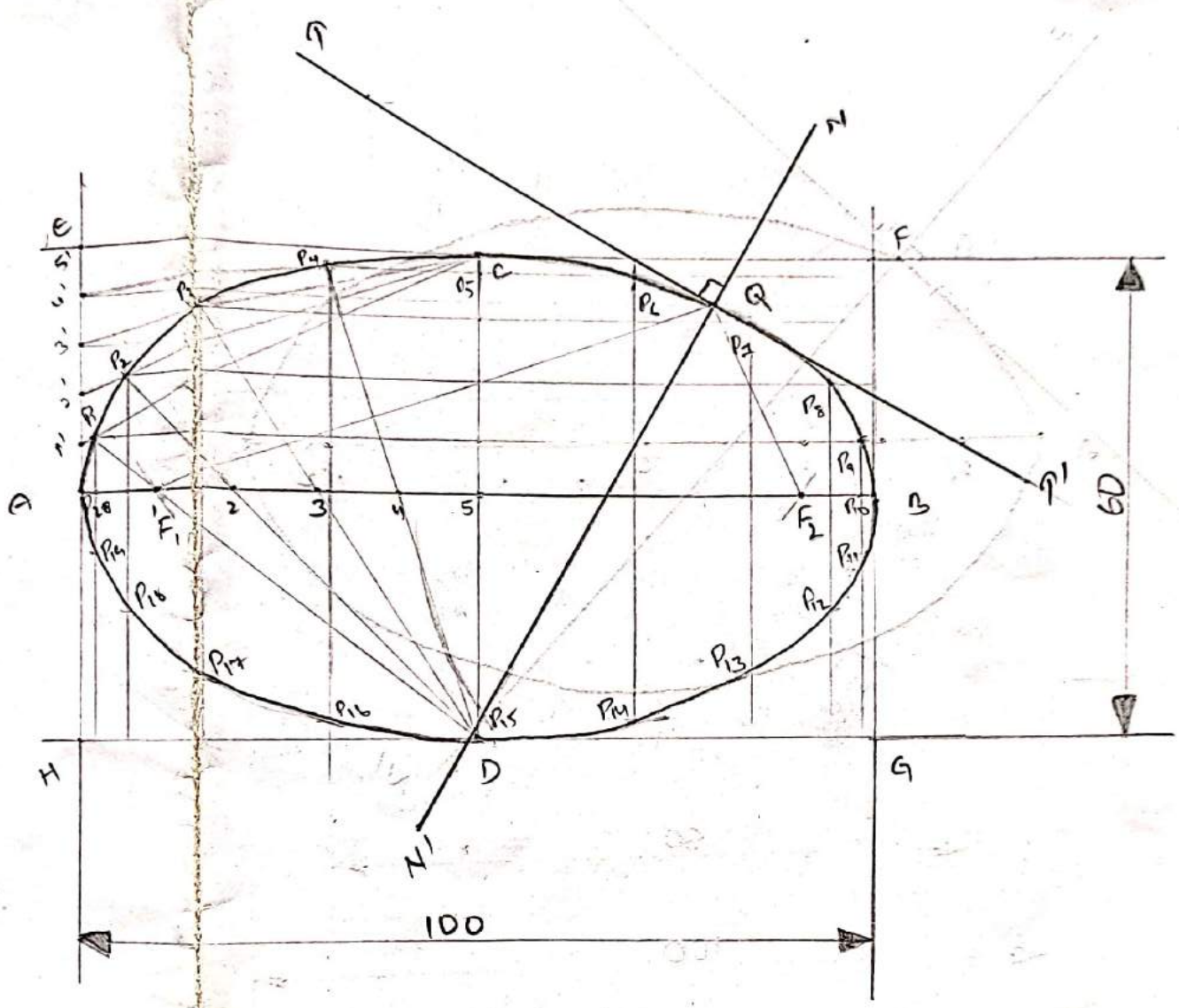
HYPERBOLA BY GENERAL METHOD

(4)



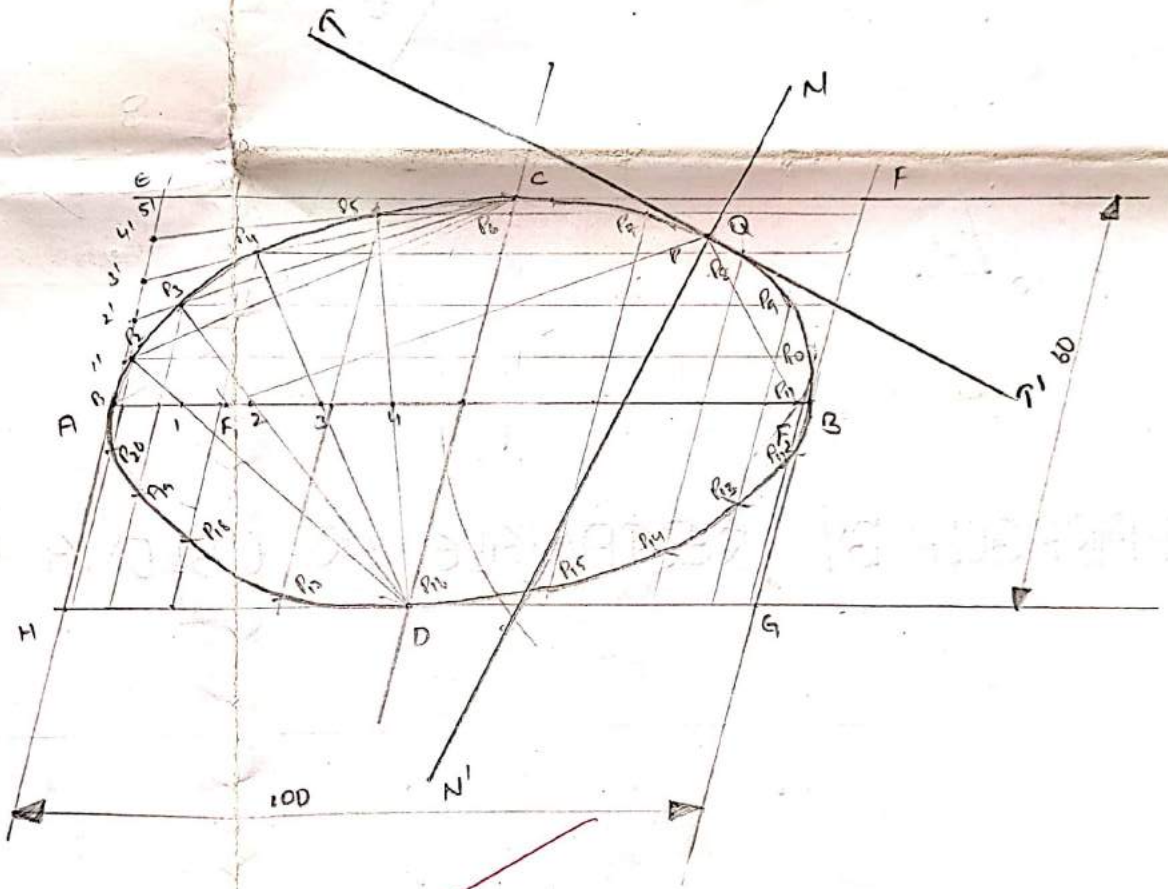
ELLIPSE BY CONCENTRIC CIRCLE METHOD

(5)



ELLIPSE BY RECTANGLE OR OBLONG METHOD

(6)

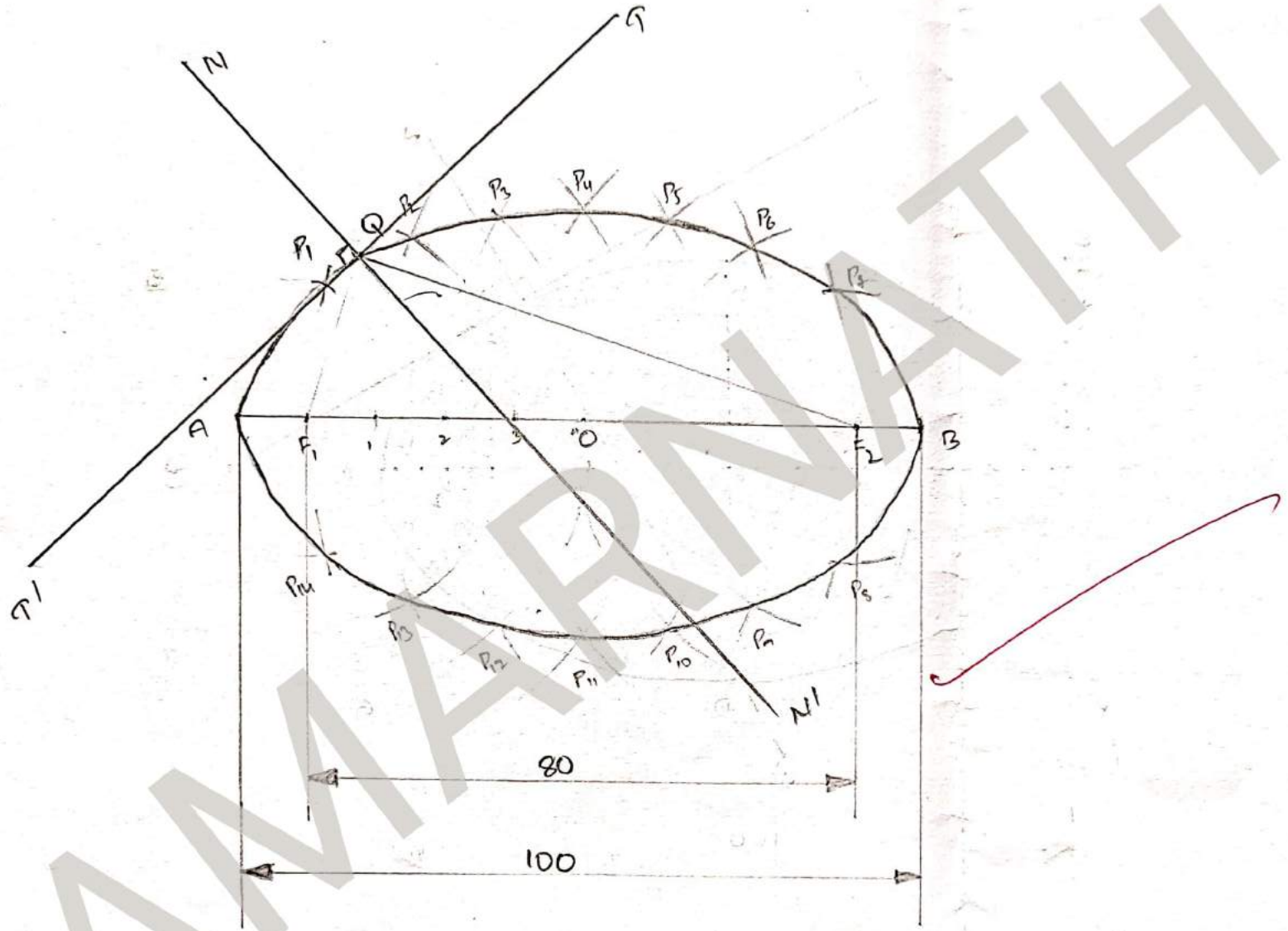


ELLIPSE BY PARALLELOGRAM METHOD

10/10

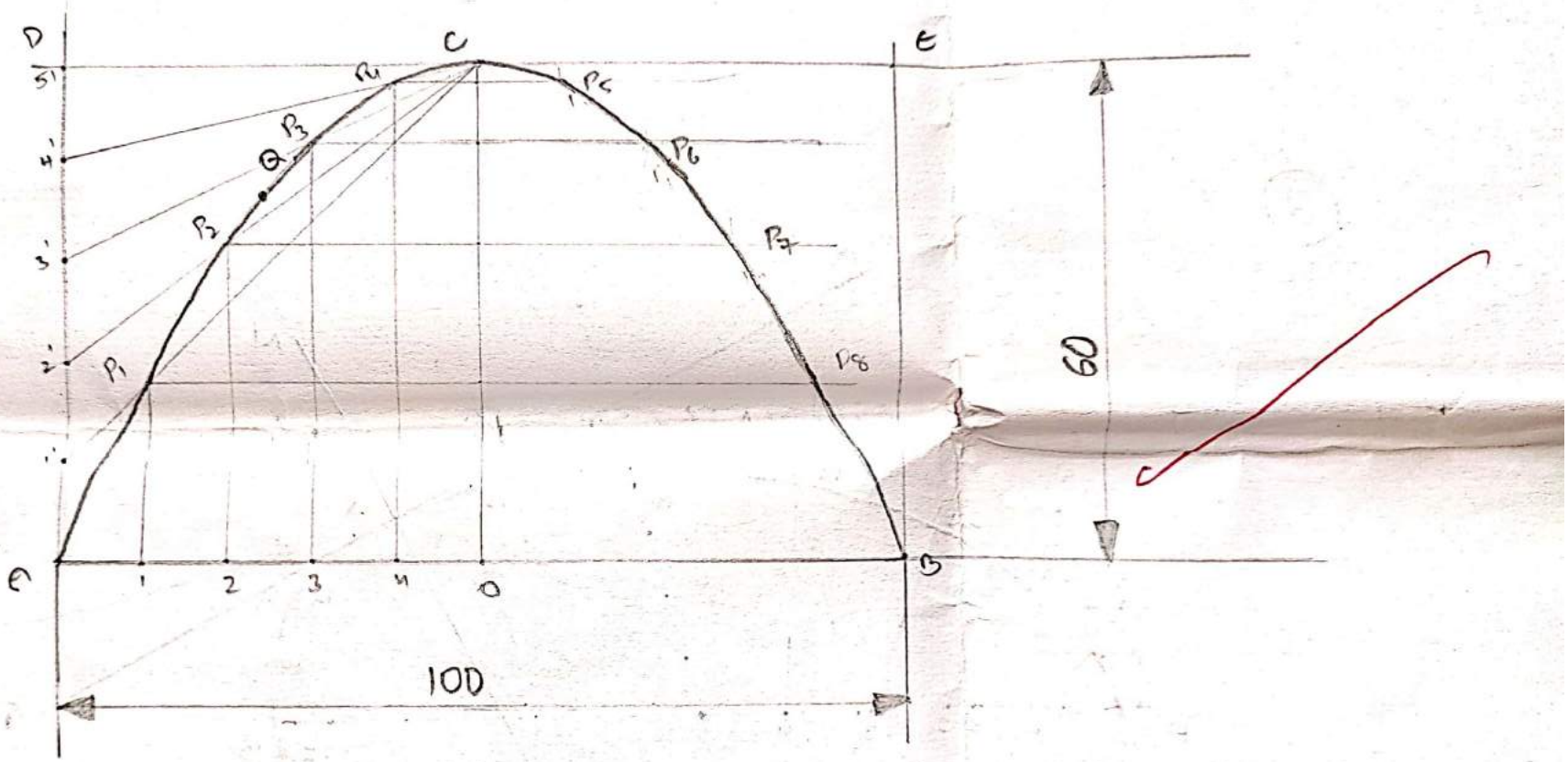
20/8/19

(7)



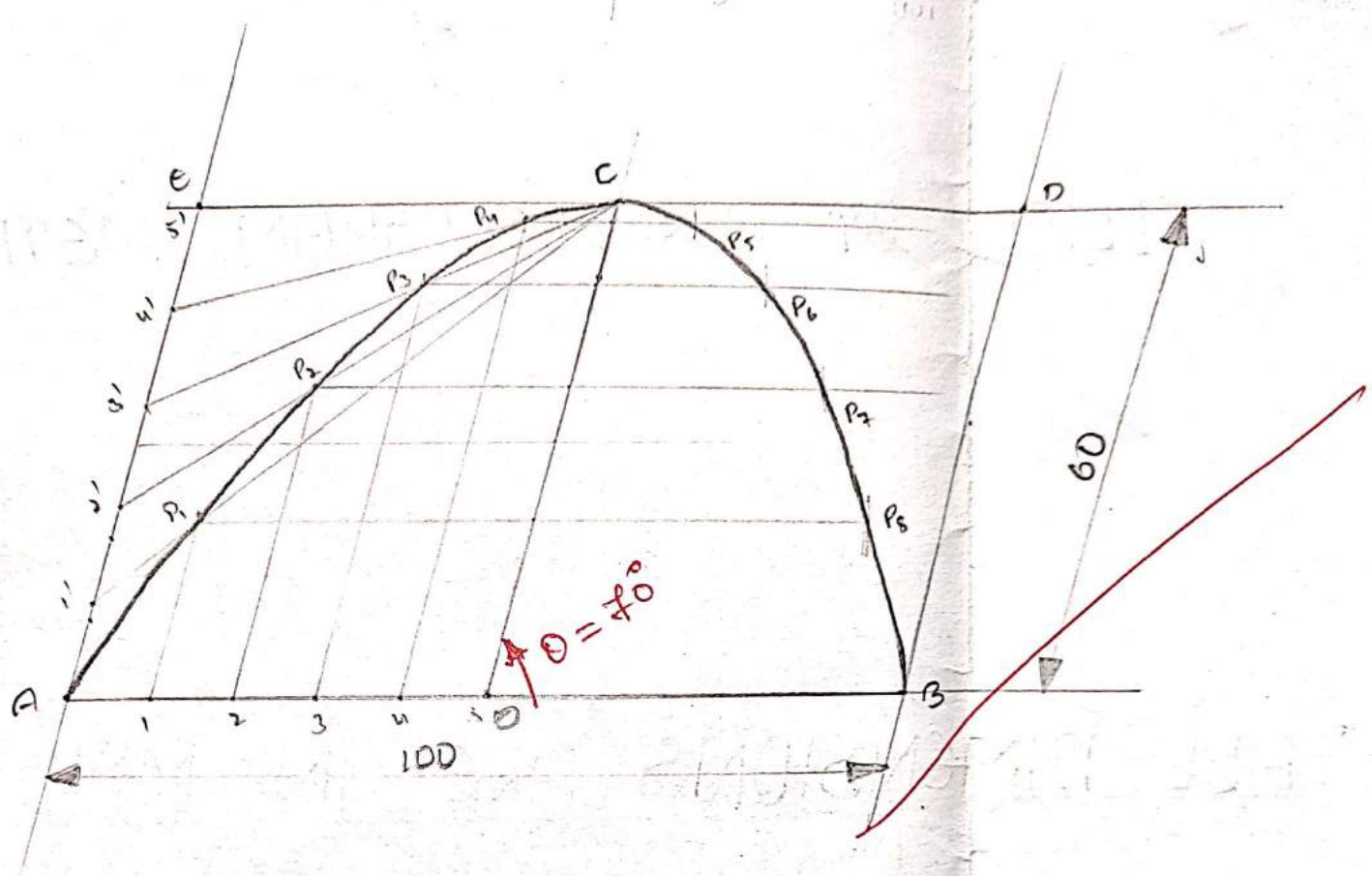
ELLIPSE BY INTERSECTING ARC'S METHOD.

(8)



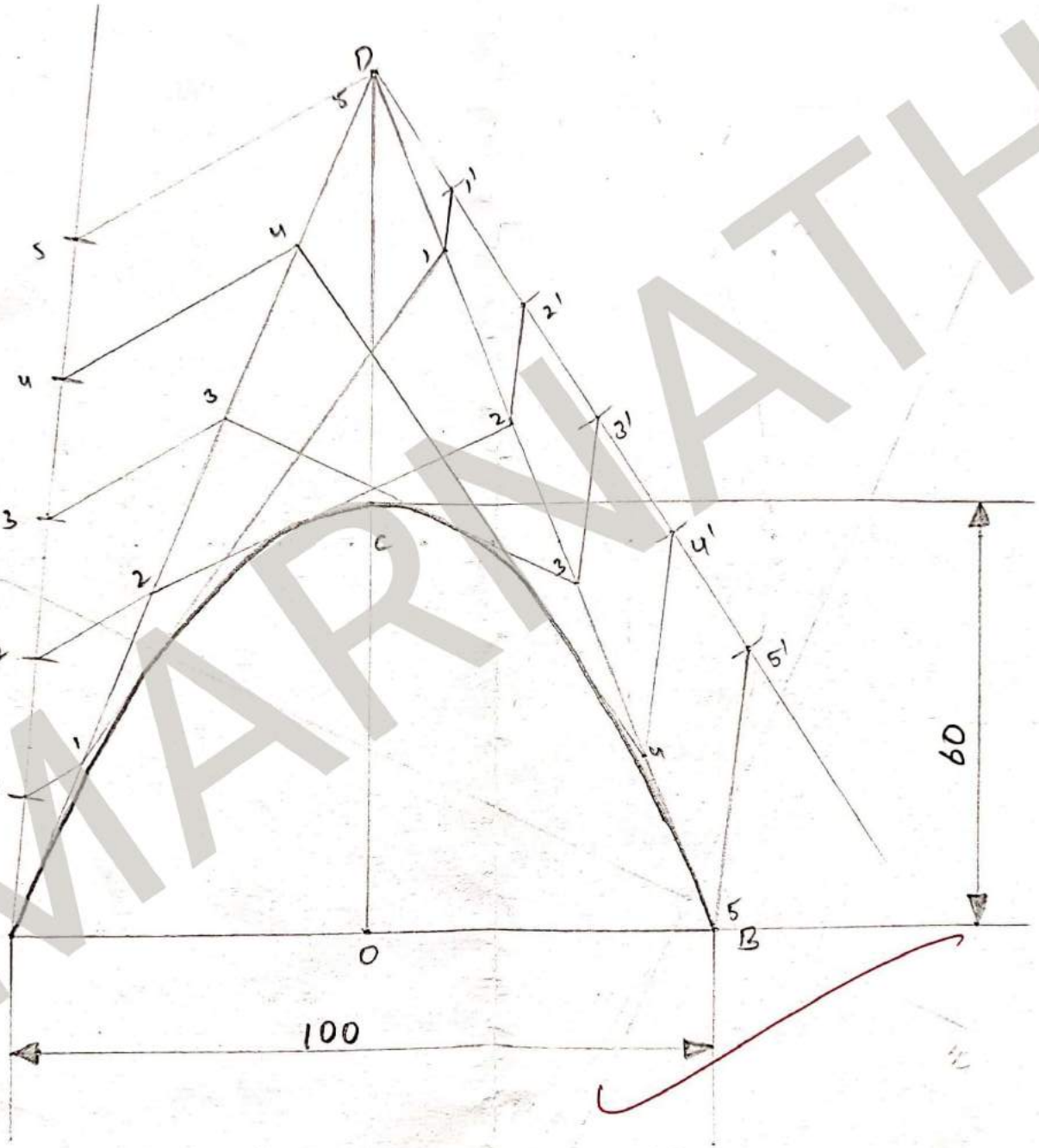
PARABOLA BY RECTANGLE OR OBLONG METHOD

(9)



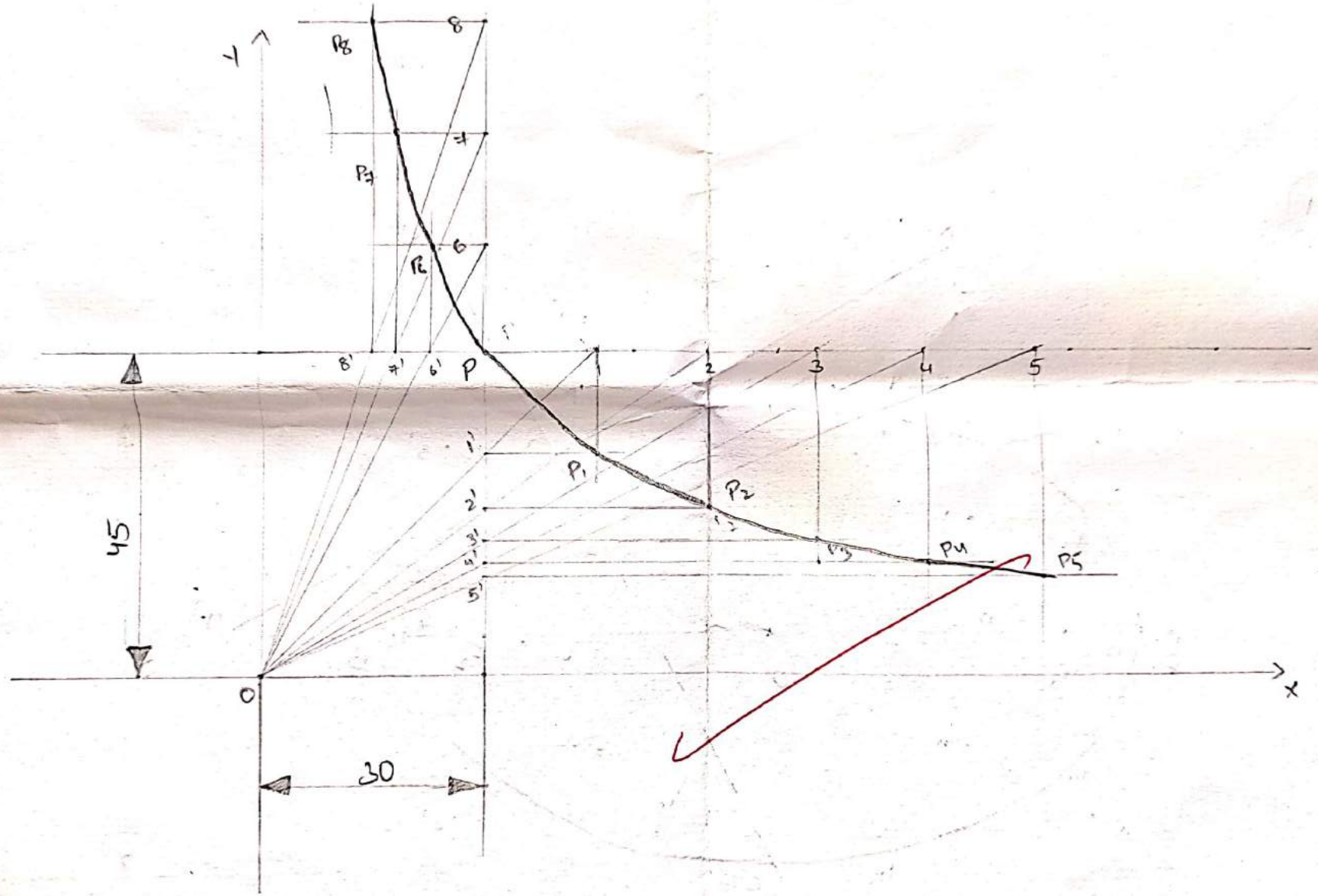
PARABOLA BY PARALLELOGRAM METHOD

(10)



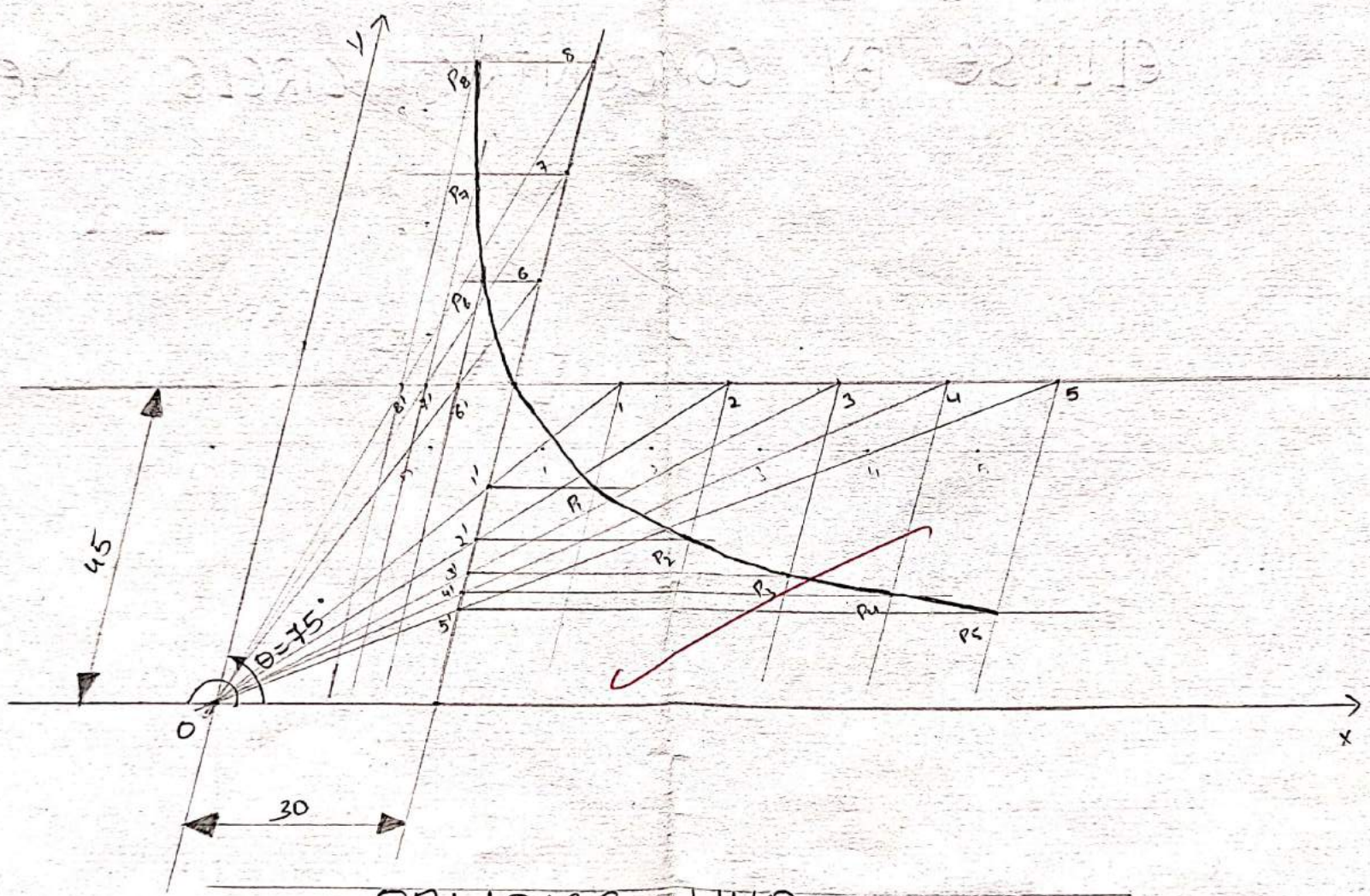
PARABOLA BY TANGENT METHOD

(11)



HYPERBOLA BY RECTANGLE METHOD

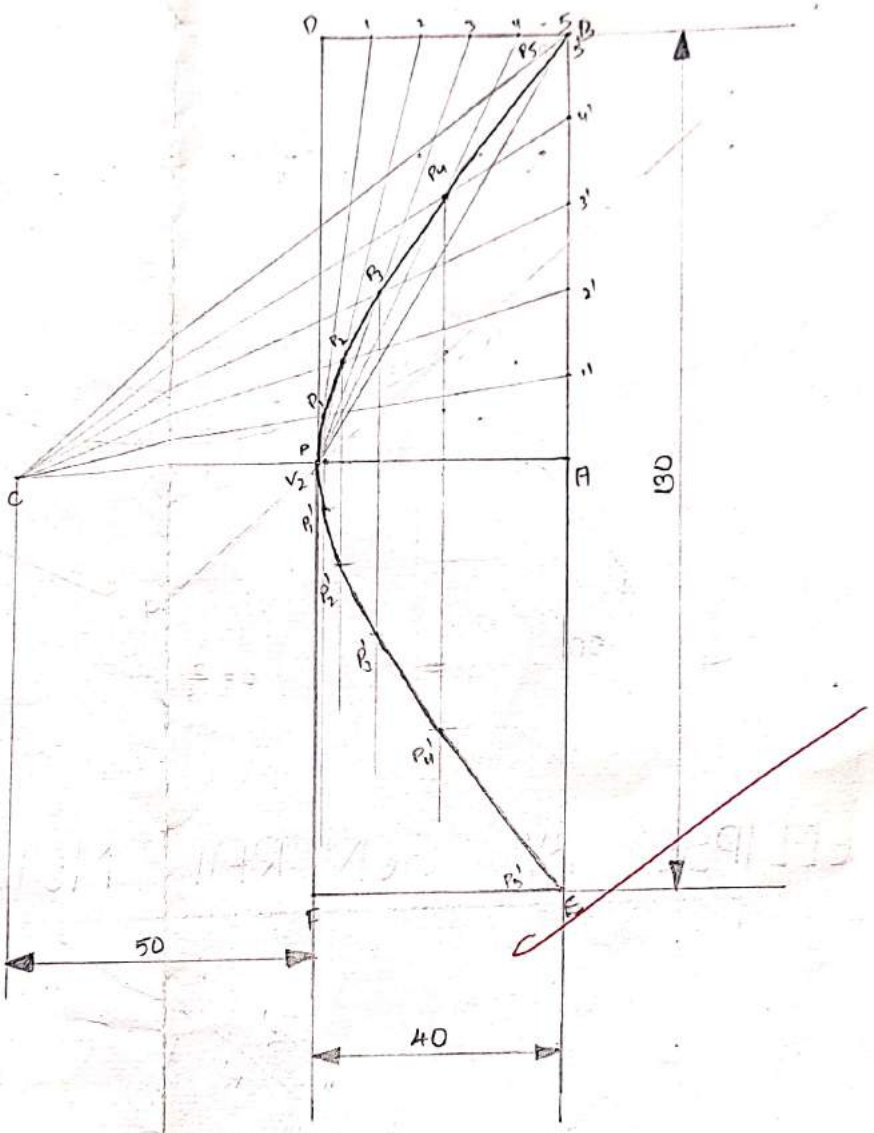
13



OBLIQUE HYPERBOLA

HYPERBOLA BY PARALLELOGRAM METHOD

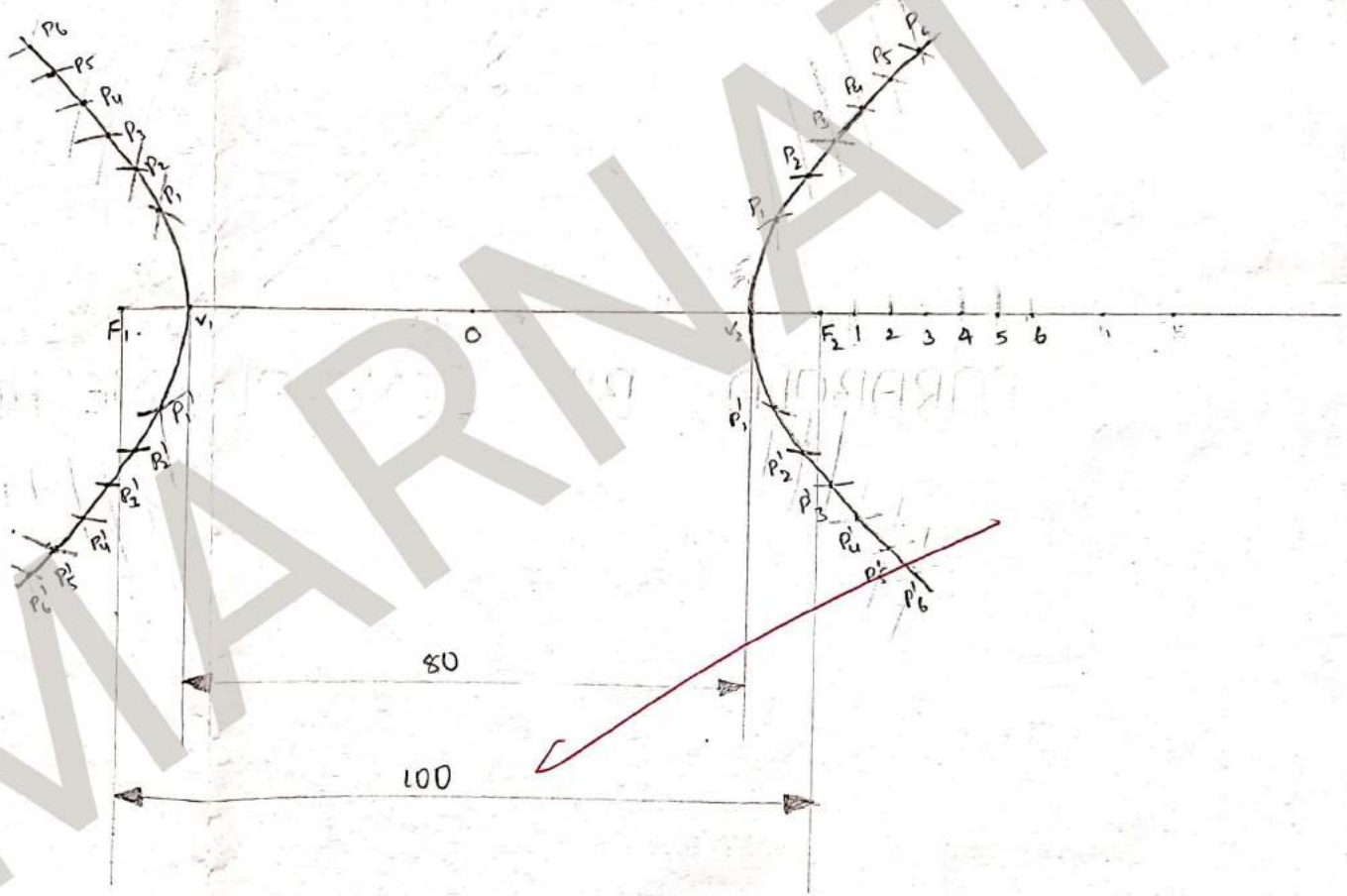
(13)



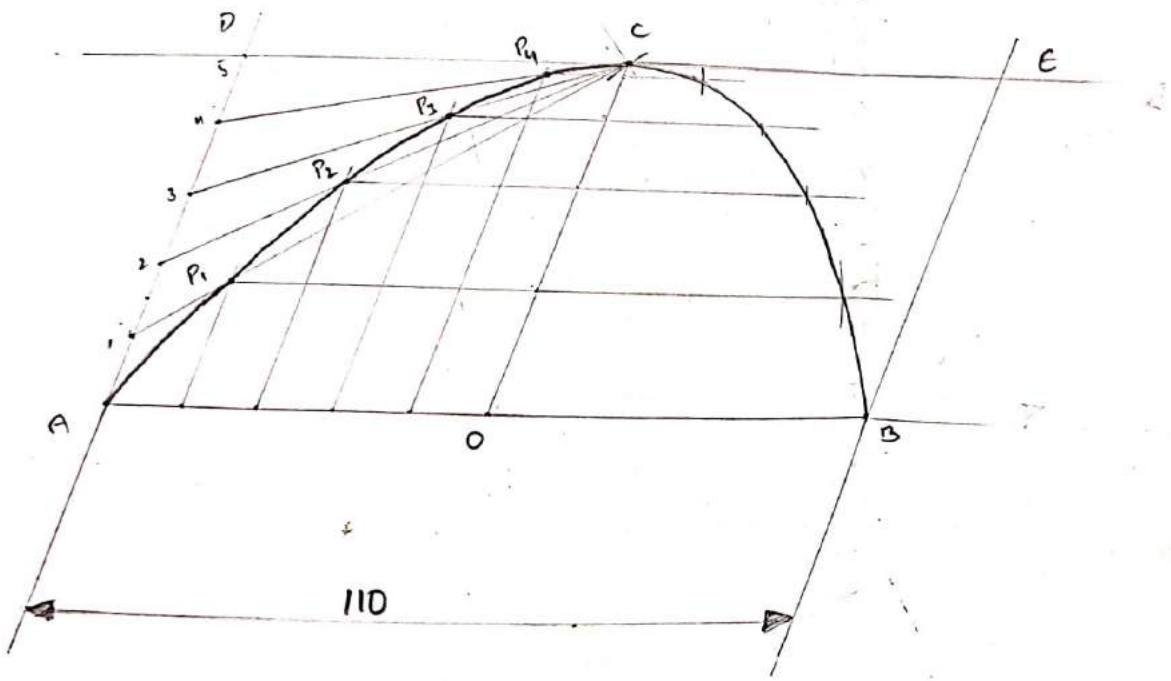
WHEN ABSCISSA, HALF OF THE TRANSVERSE AXIS, AND DOUBLE ORDINATE IS GIVEN, THE HYPERBOLA IS AS ABOVE.

(13A)

(14)



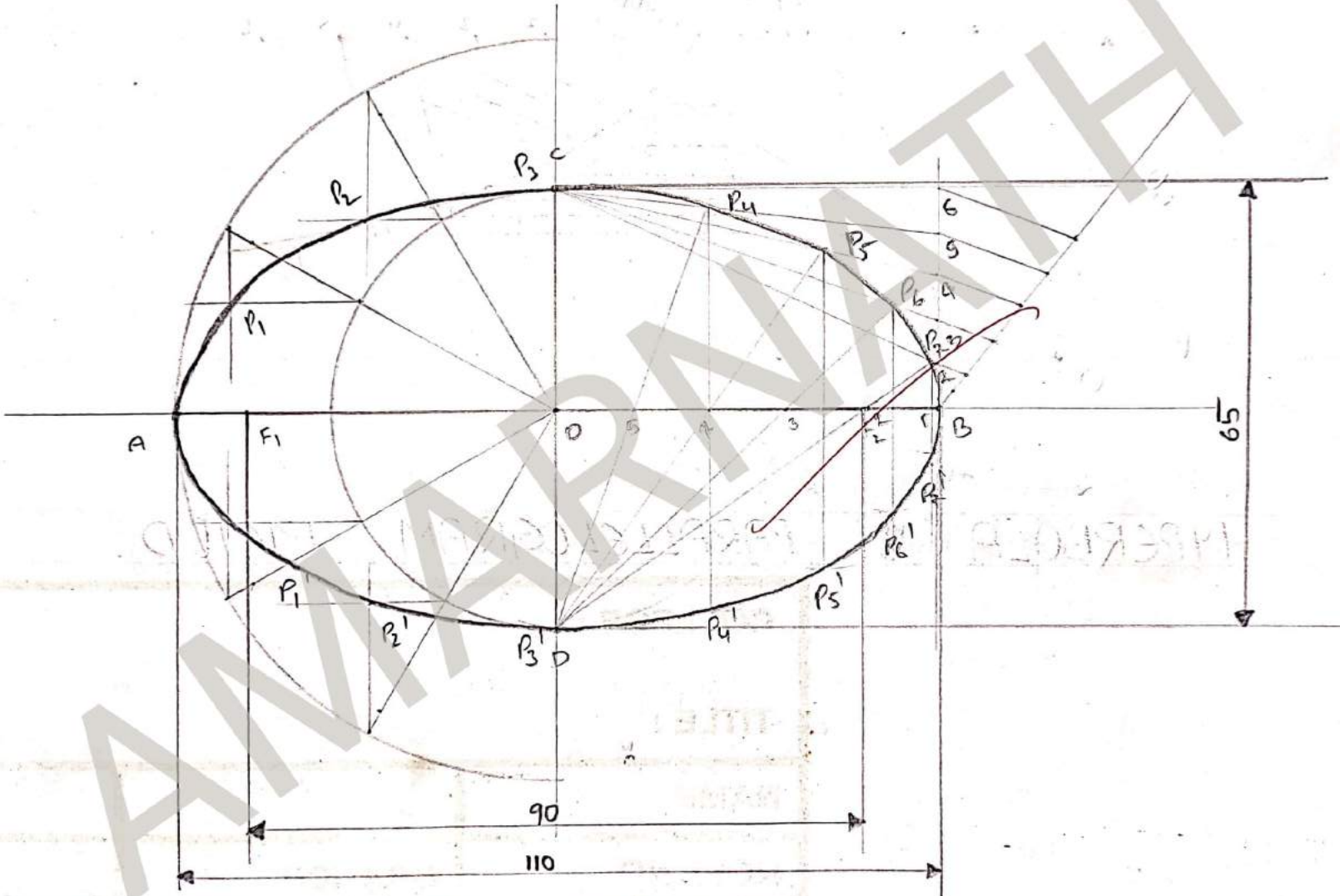
A PAIR OF HYPERBOLA METHOD



PARABOLA, WHEN THREE POINS ARE GIVEN

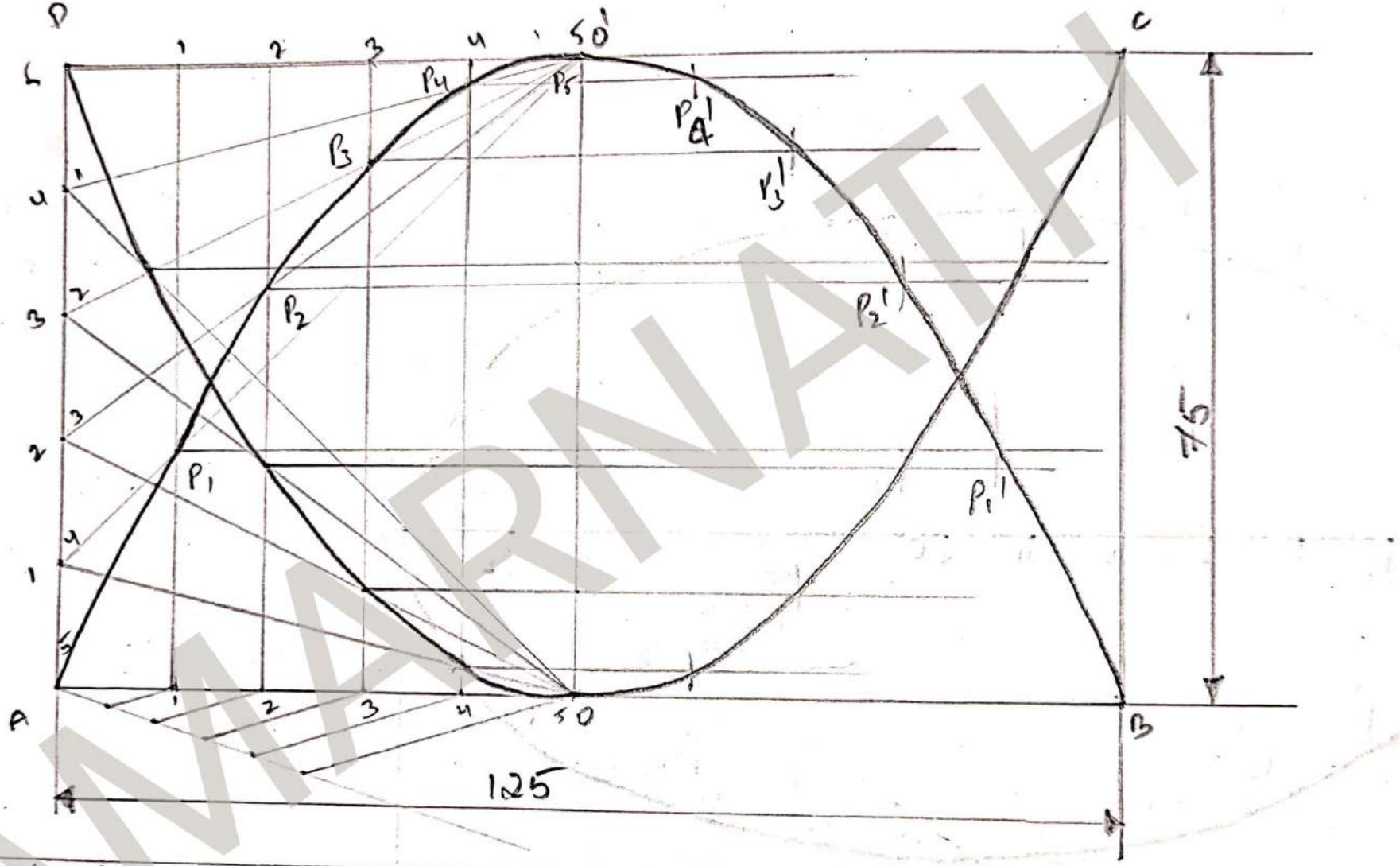
PARALLELOGRAM METHOD

(5)

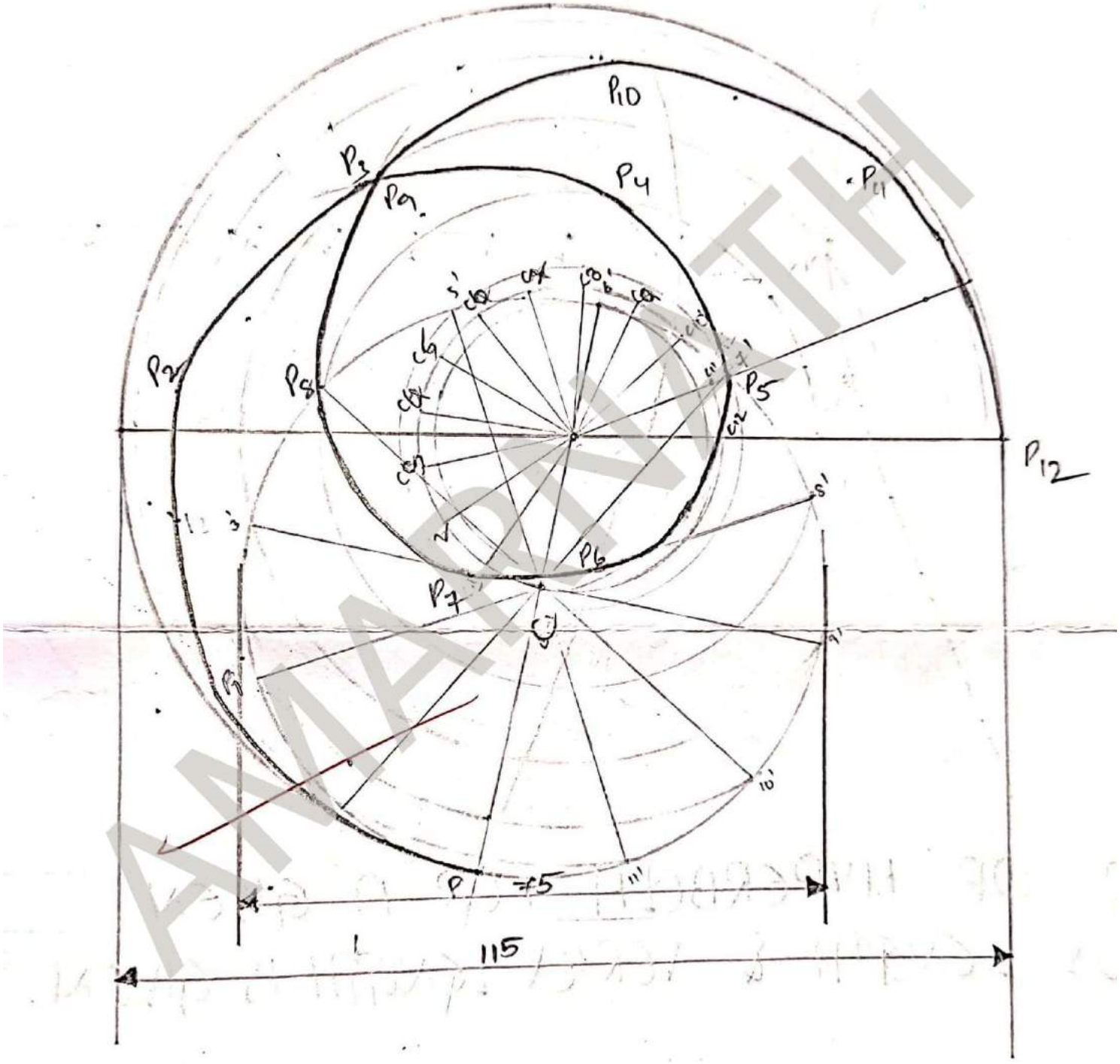


HALF PART OF ELLIPSE BY CONCENTRIC CIRCLES & OTHER BY OBLONG METHOD

(8)

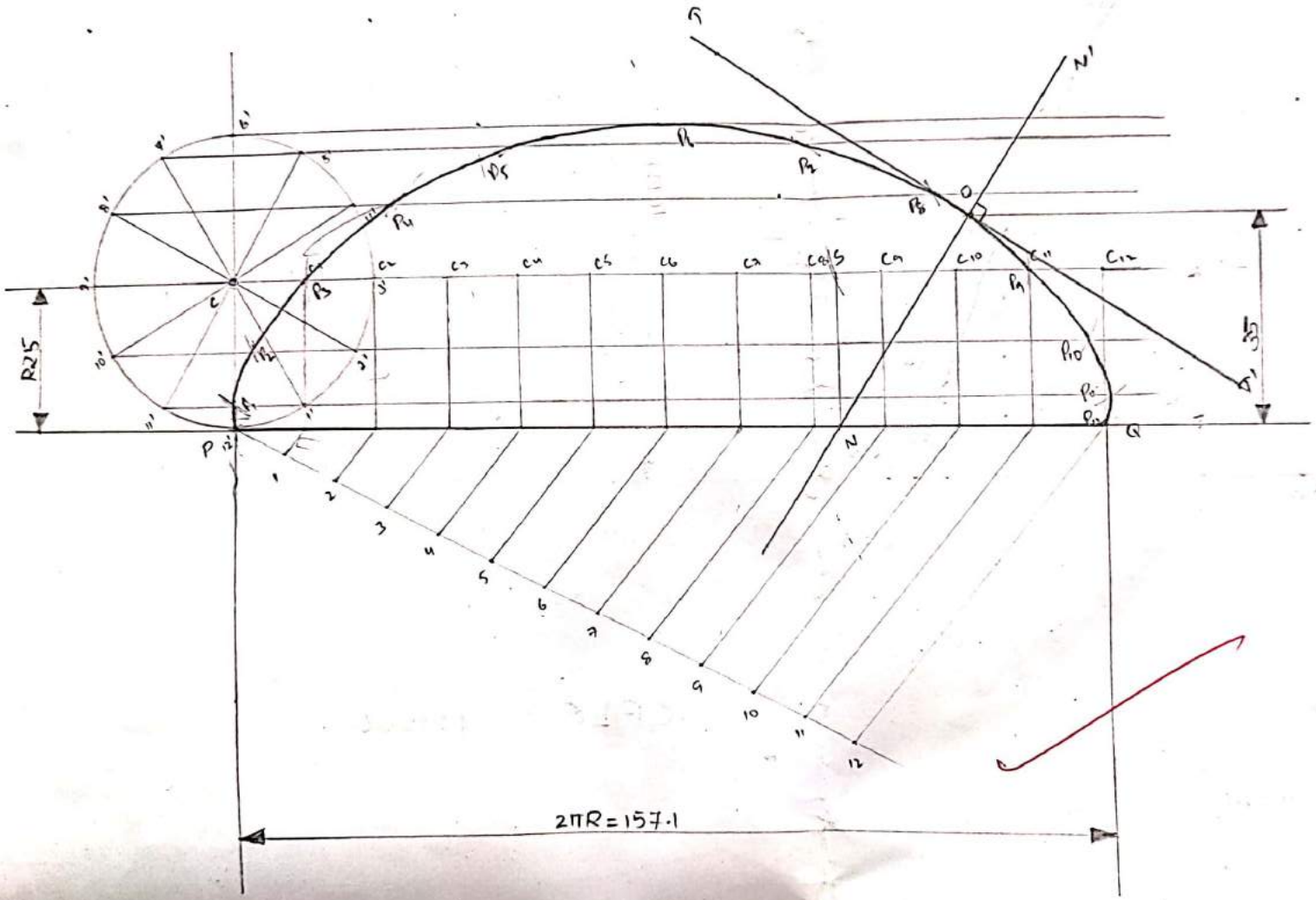


INSCRIBING TWO PARABOLAS IN RECTANGLE WITH ITS AXIS BISECTING EACH OTHER.



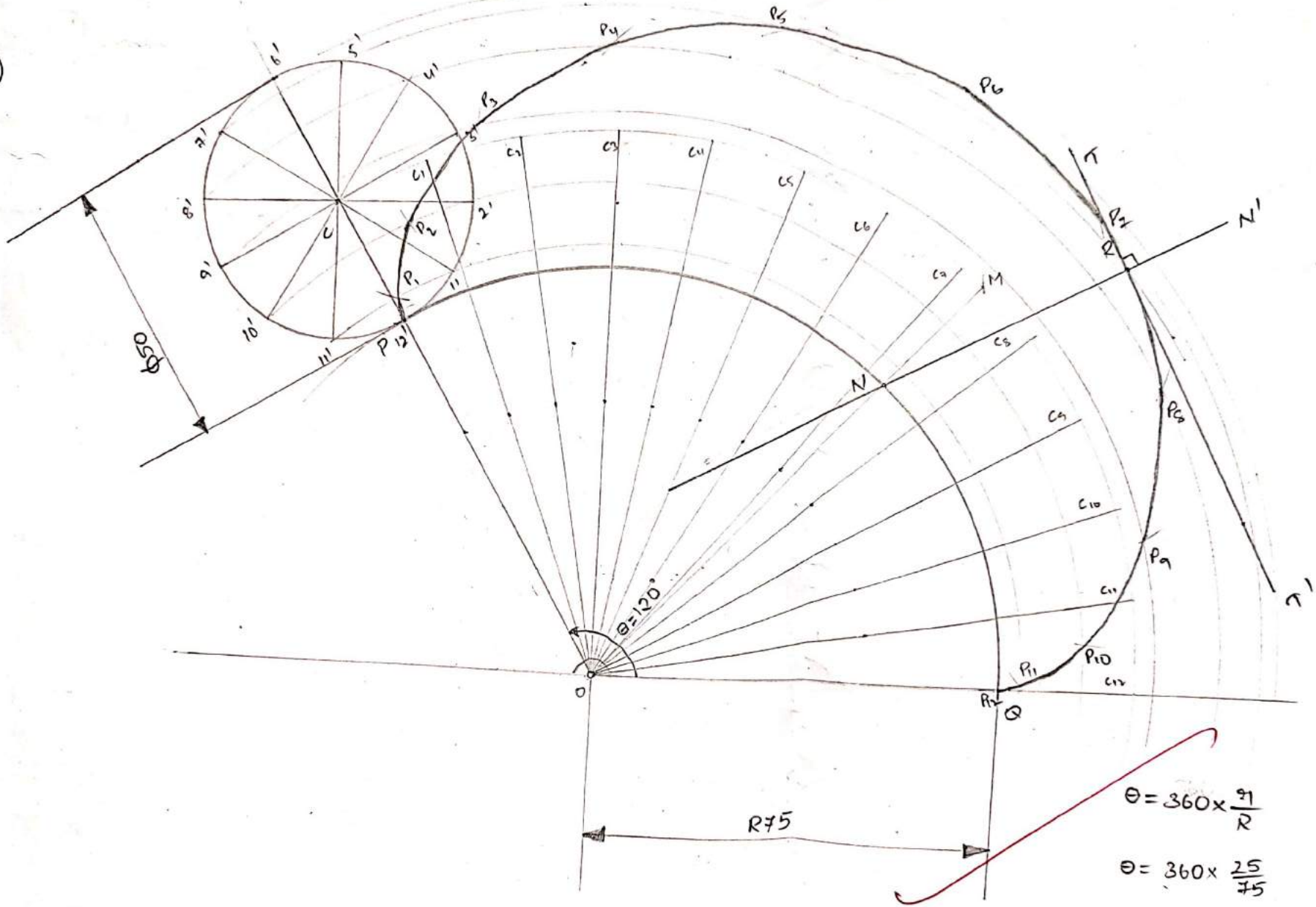
HYPO CYCLOID.

①



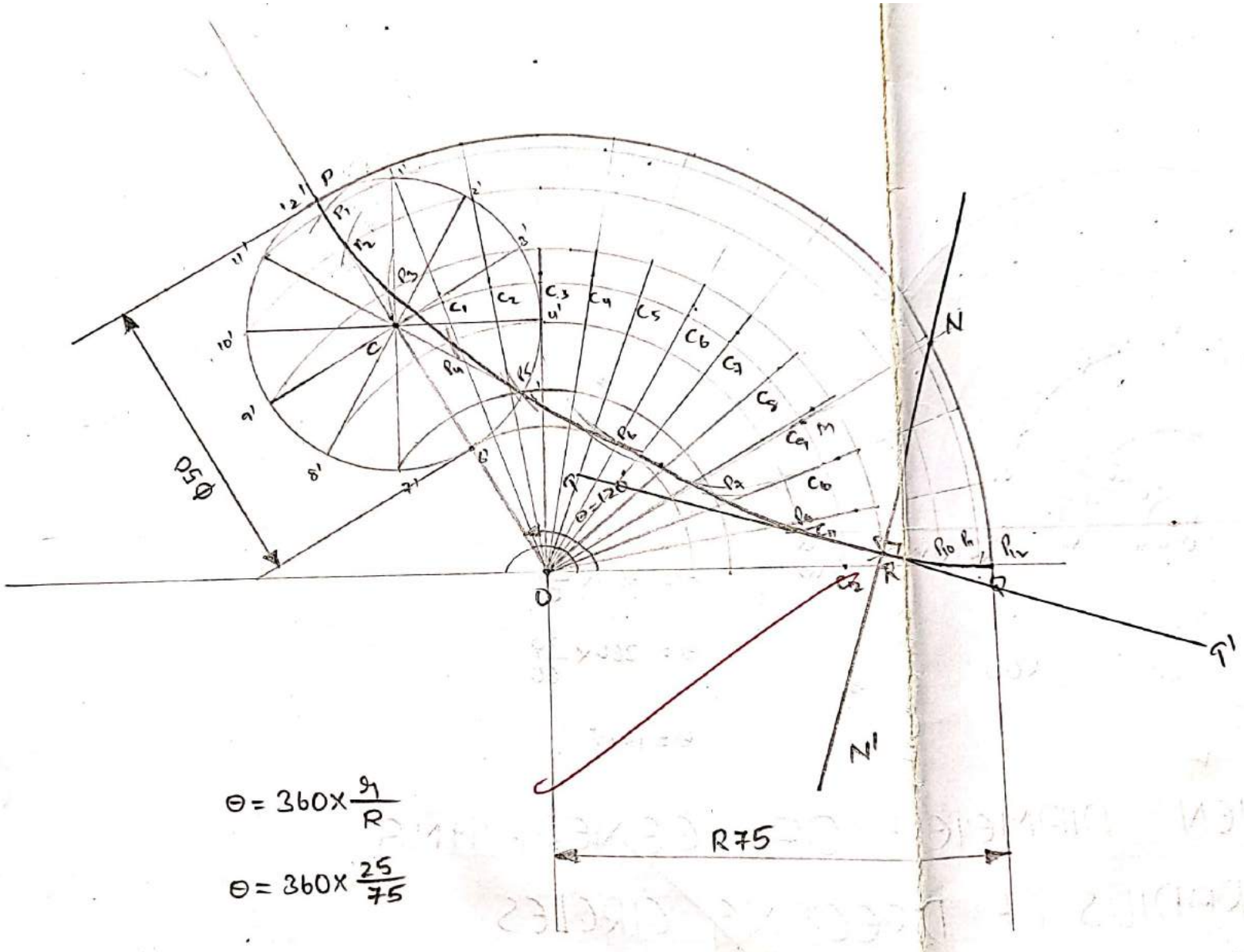
CYCLOIDAL CURVE

(2)



EPI CYCLOID

(3)



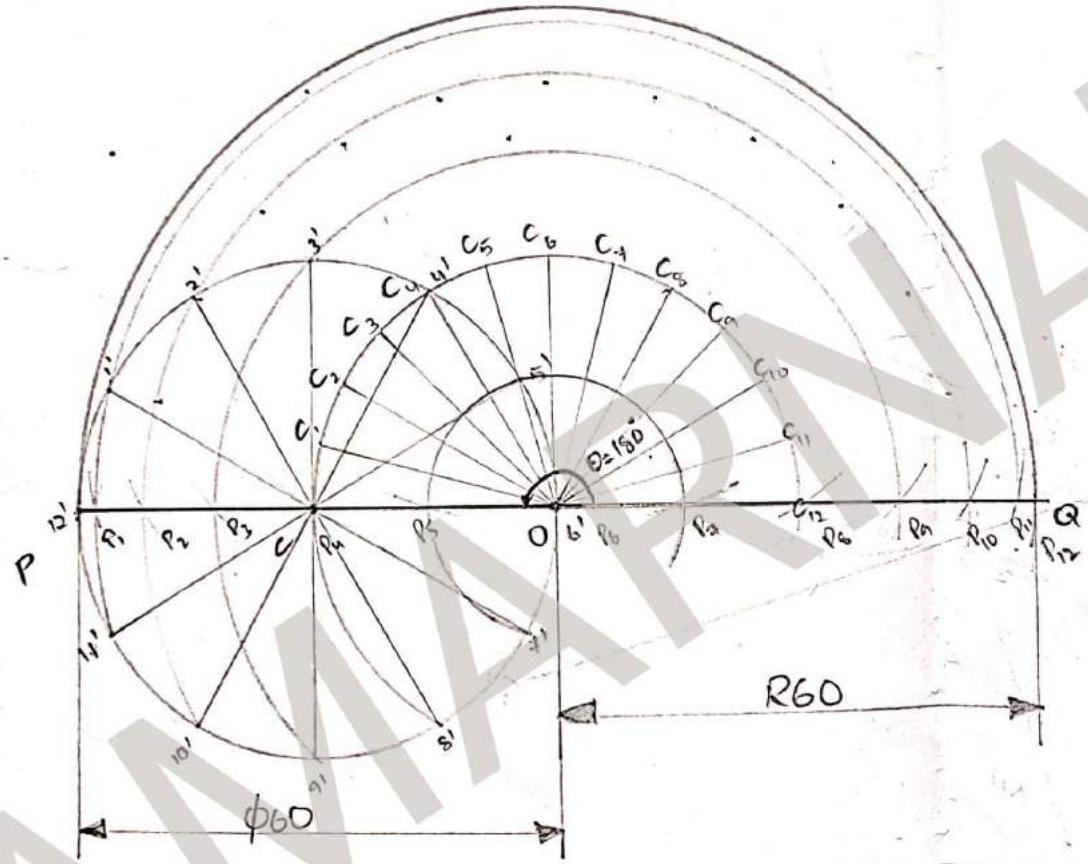
$$\theta = 360 \times \frac{d}{R}$$

$$\theta = 360 \times \frac{25}{75}$$

$$\theta = 120^{\circ}$$

HYPO CYCLOID

(4)



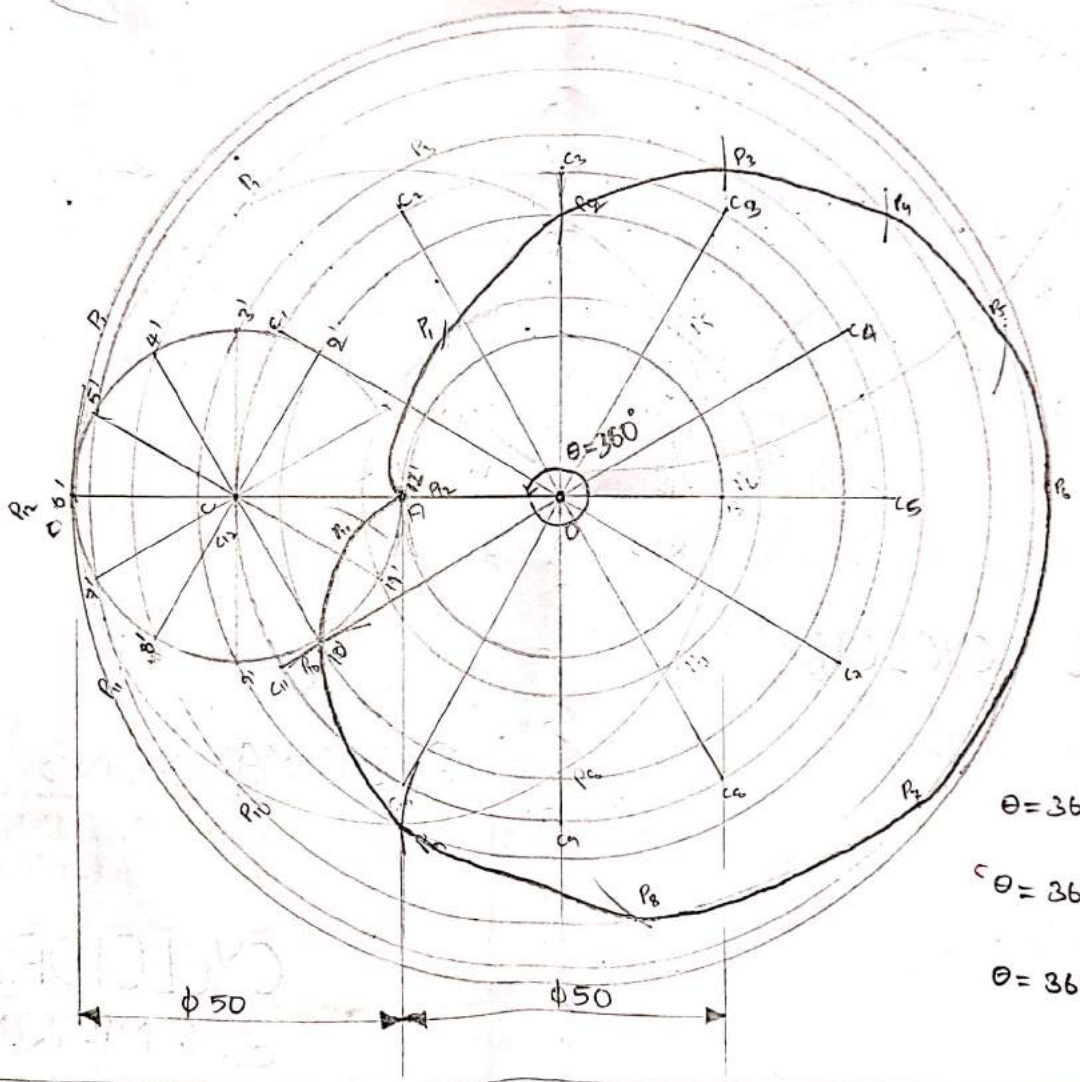
$$\theta = 360 \times \frac{g_1}{R}$$

$$\theta = 360 \times \frac{30}{60}$$

$$\theta = 180^\circ$$

HYPO CYCLOID WHEN DIAMETER OR GENERATING CIRCLE AND RADIUS OF DIRECTING CIRCLES ARE SAME.

5



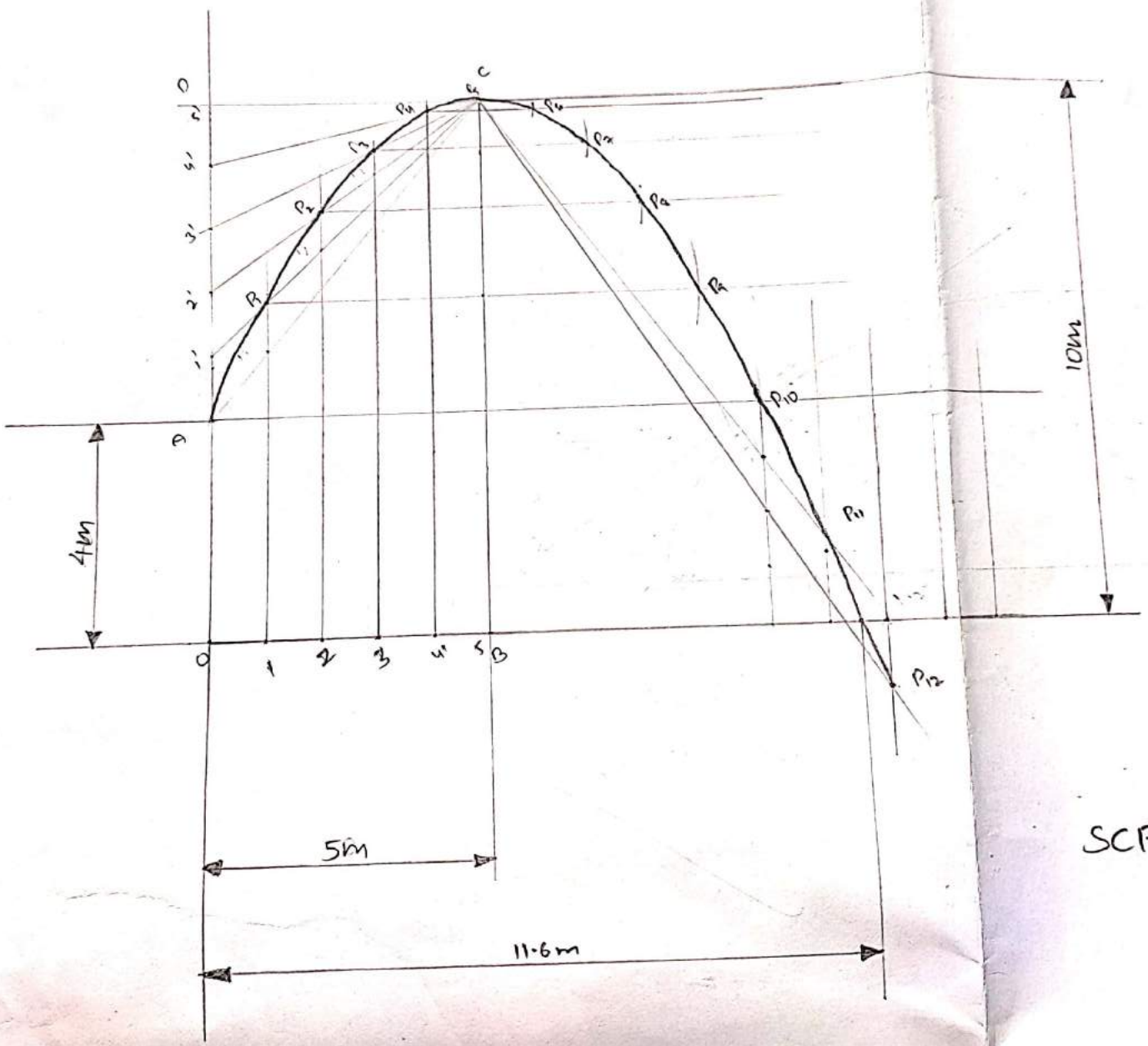
$\theta = 360 \times \frac{91}{R}$

$\theta = 360 \times \frac{25}{25}$

$\theta = 360°$

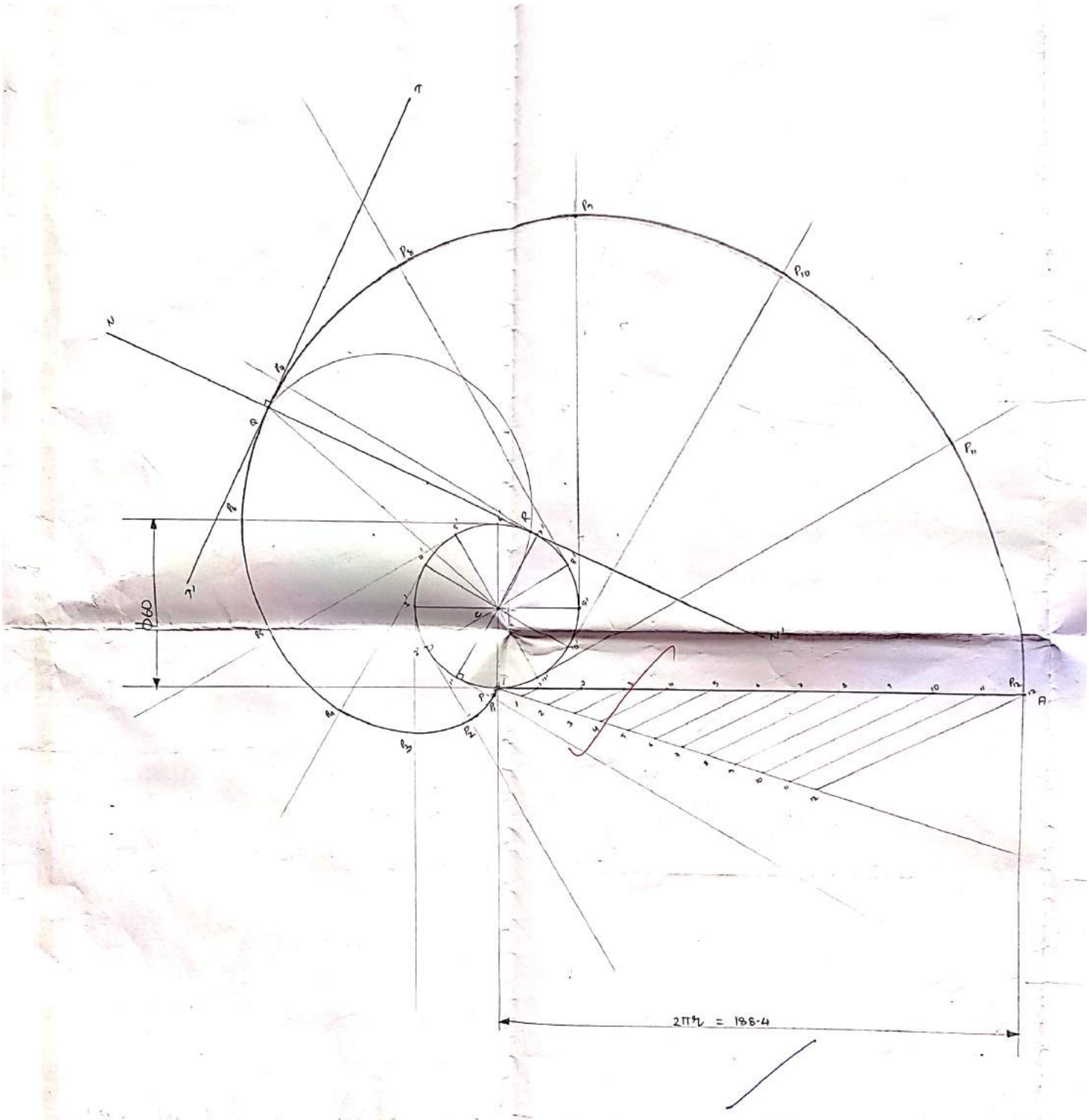
EPI CYCLOID WHEN DIAMETER OF GENERATING CIRCLE & DIRECTING CIRCLES ARE SAME.

(5)

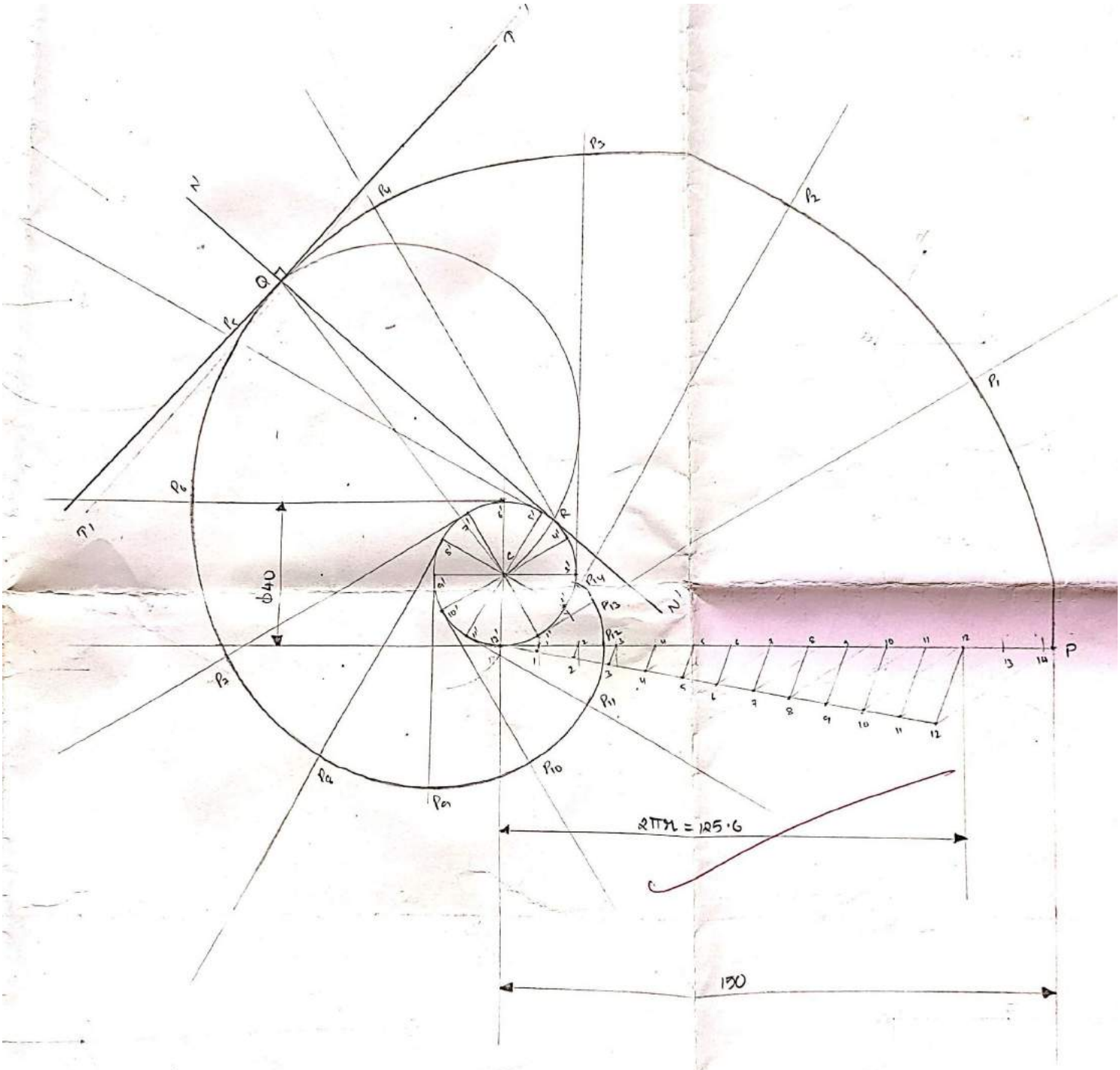


SCALE :- 1:1000

RECTANGULAR PARABOLA

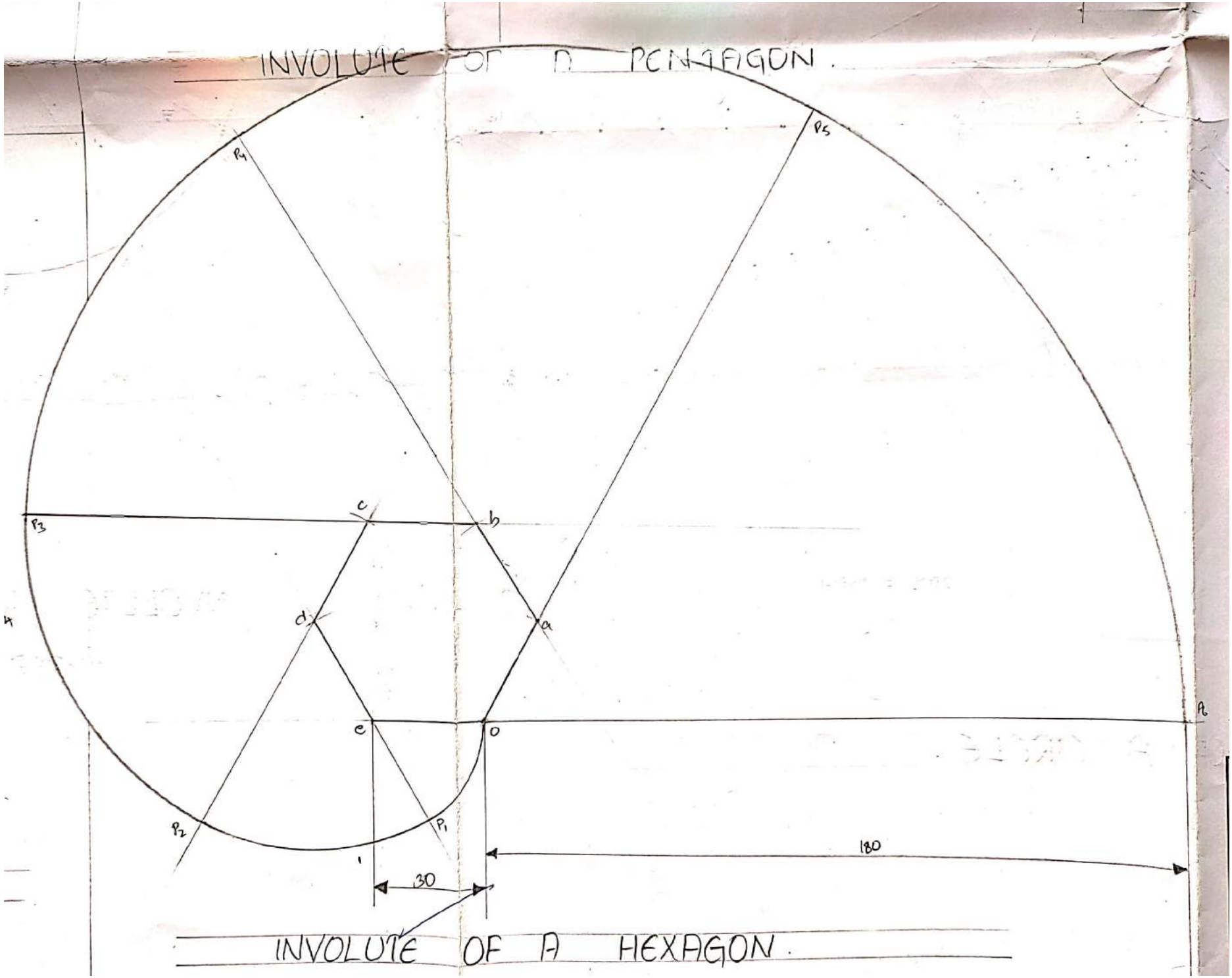


INVOLUTE OF A CIRCLE.



INVOLUTE, WHEN THE LENGTH OF THE THREAD IS GIVEN.

INVOLUTE OF A PENTAGON.



INVOLUTE OF A HEXAGON.

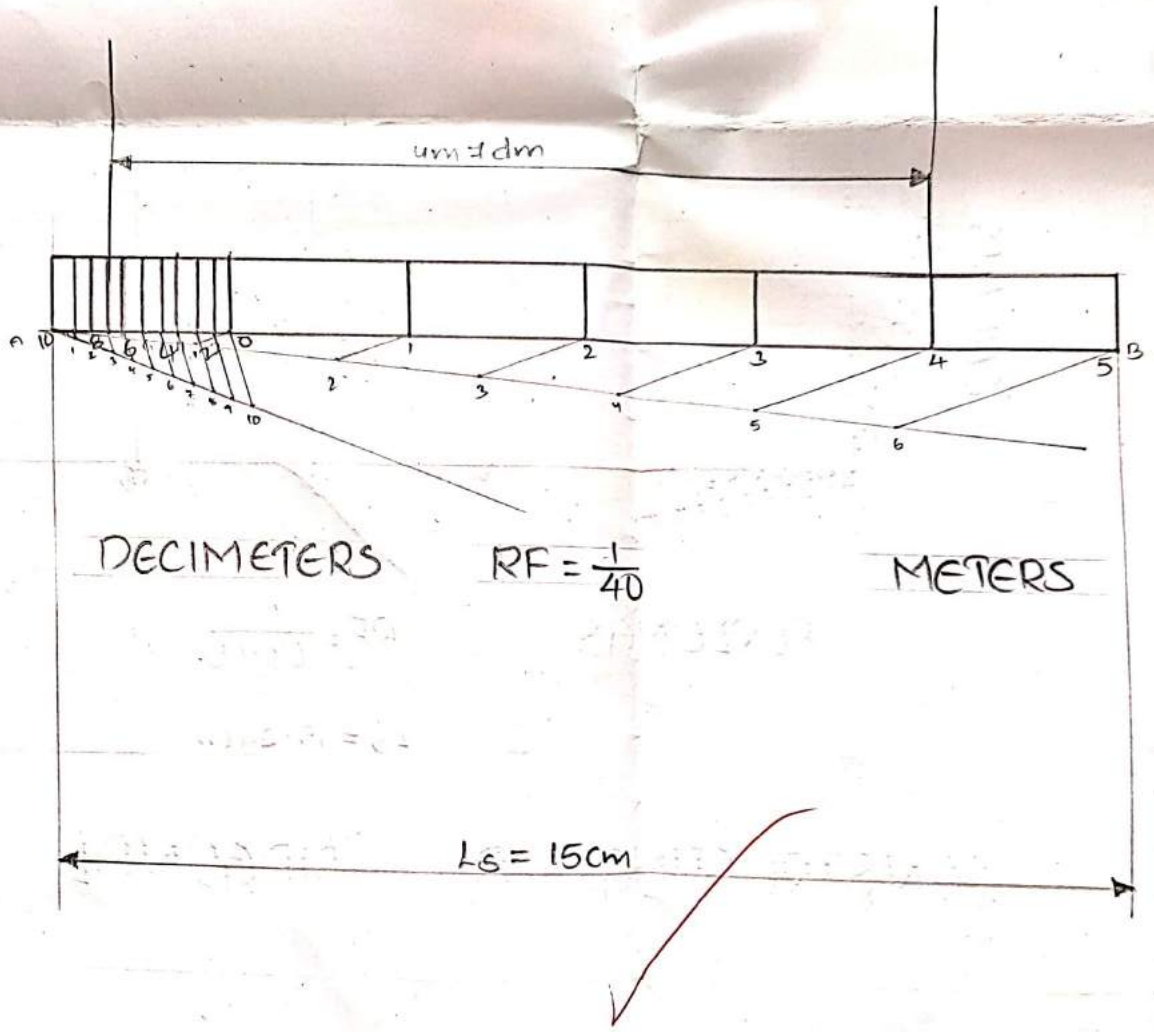
METRIC STANDARD UNITS

1	KILOMETER	(KM)	= 10 HECTAMETERS	(HM)
1	HECTAMETER	(HM)	= 10 DECAMETERS	(DM)
1	DECAMETER	(DM)	= 10 METERS	(m)
1	METER	(m)	= 10 decimeters	(dm)
1	decimeter	(dm)	= 10 centimeters	(cm)
1	centimeter	(cm)	= 10 millimeters	(mm)

BRITISH STANDARD UNITS

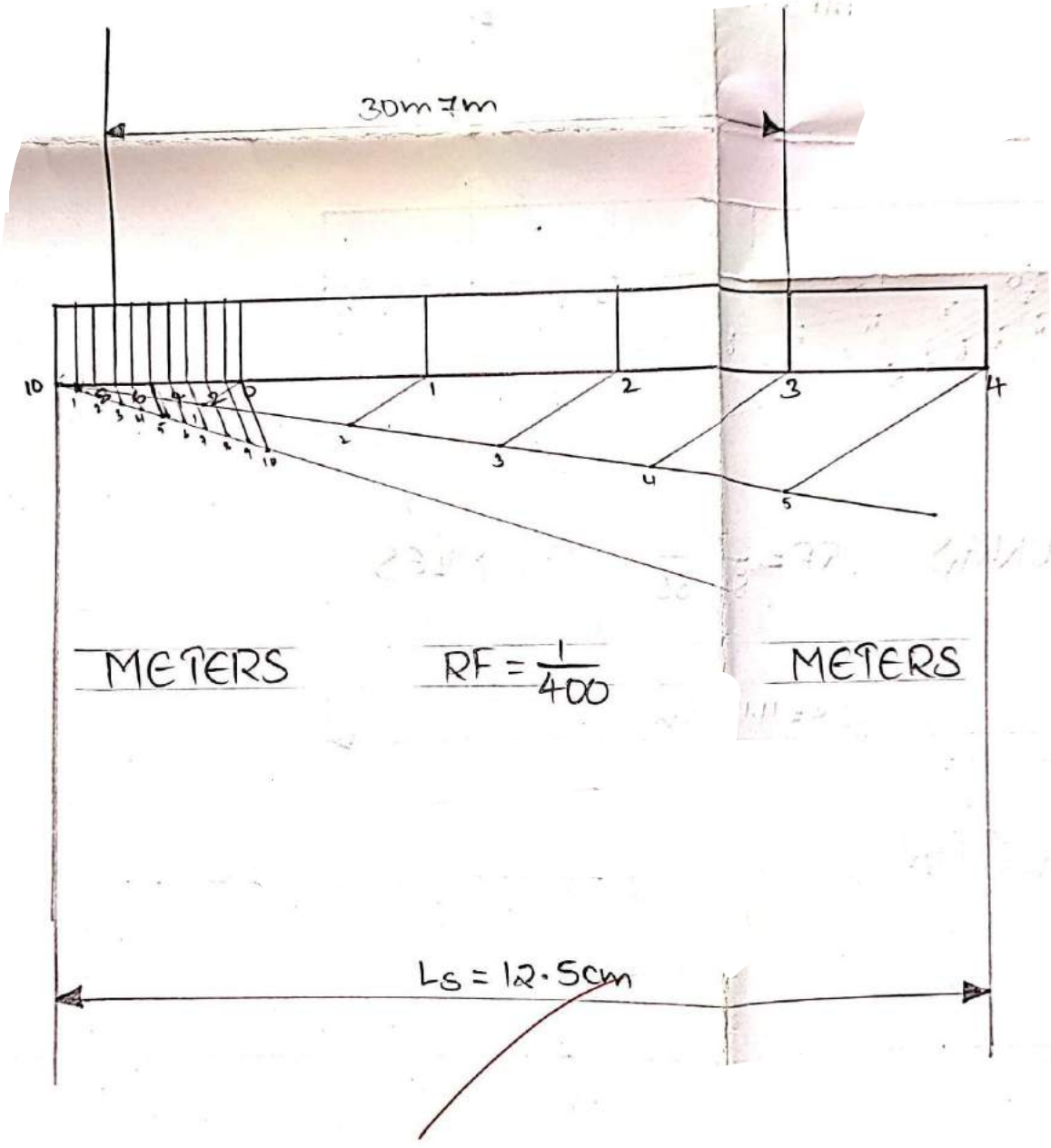
1	League	(lg)	= 3 miles	(mi)
1	MILE	(mi)	= 8 furlongs	(fur)
1	furlong	(fur)	= 10 chains	(ch)
1	Chain	(ch)	= 22 yards	(yd)
1	yard	(yd)	= 3 feets	(ft)
1	foot	(ft)	= 12 Inches	(in)

①



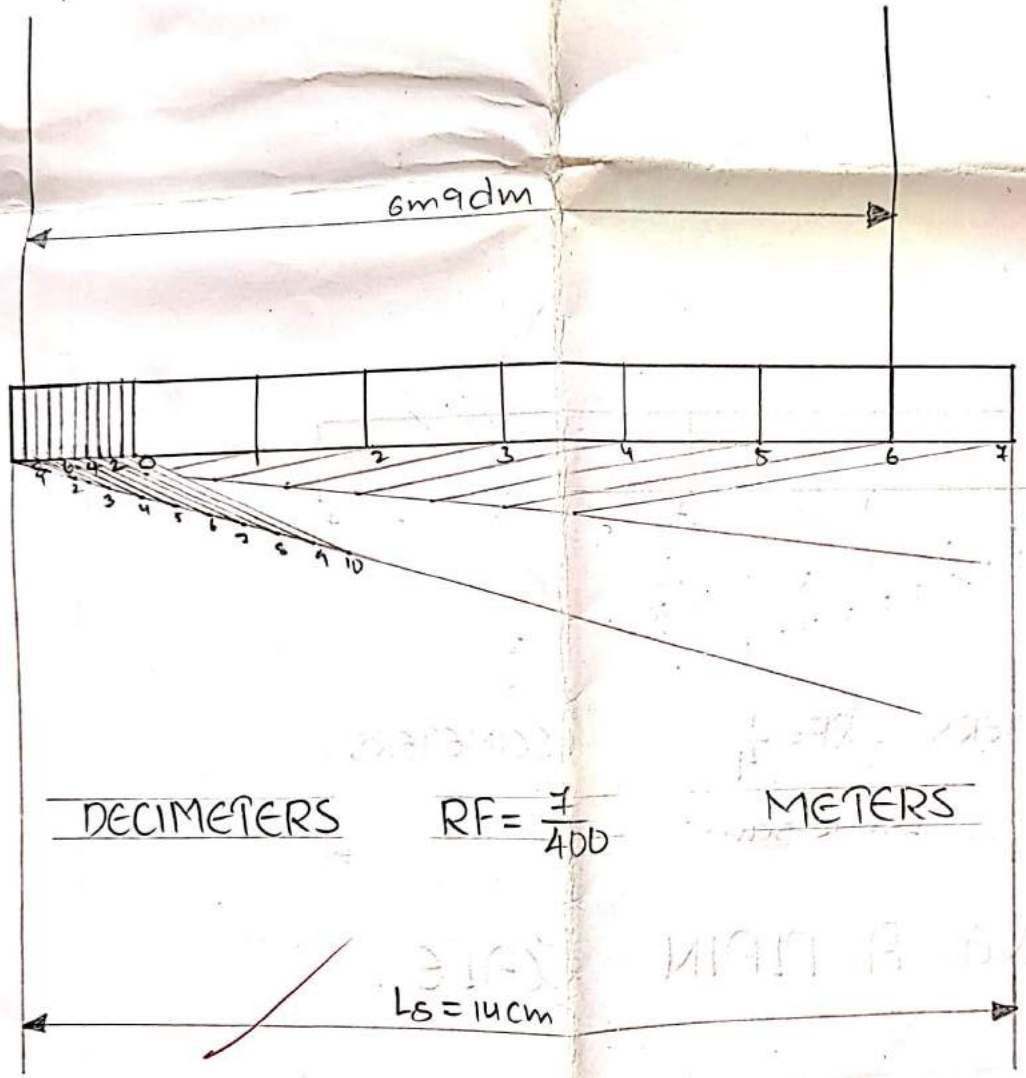
CONSTRUCTING A PLAIN SCALE

(2)



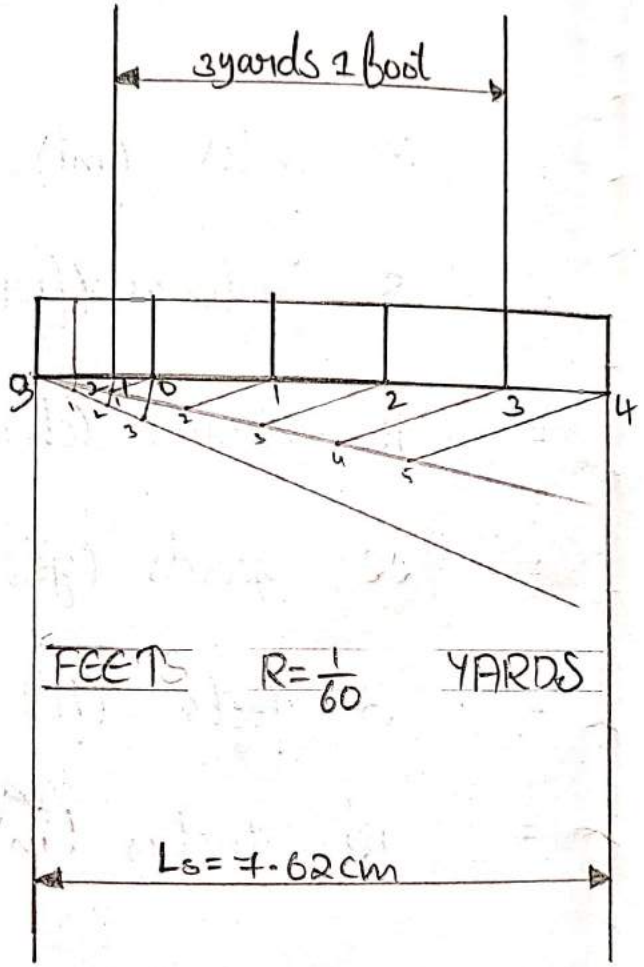
PLAIN SCALE

(3)



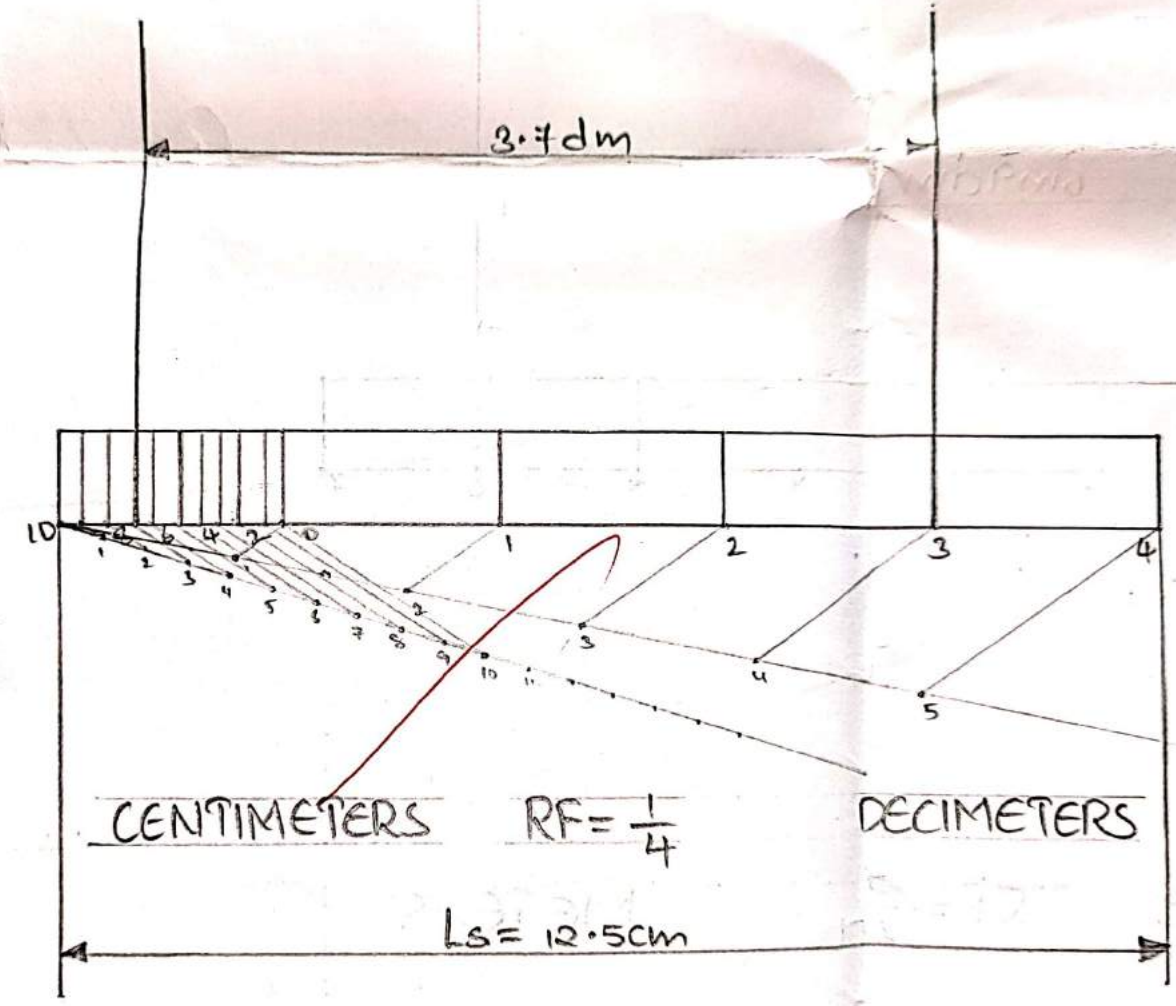
PLAIN SCALE

(4)



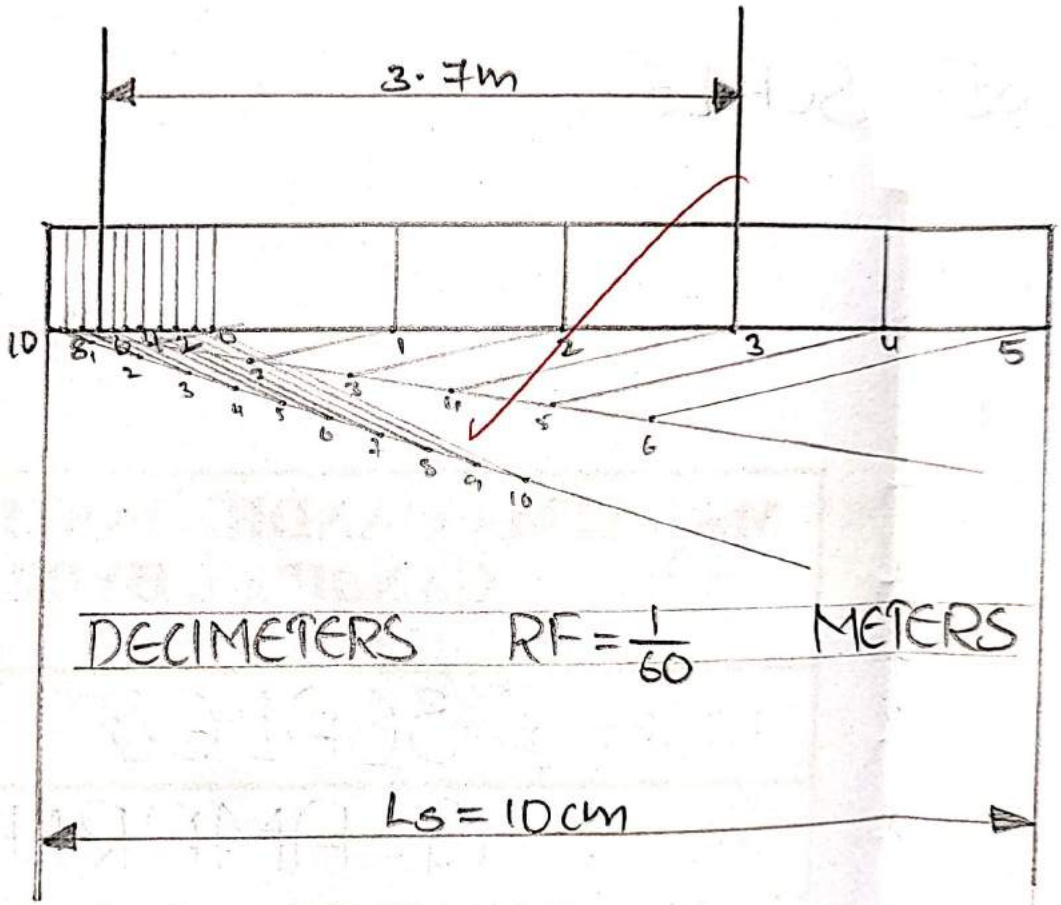
CONSTRUCTING A PLAIN SCALE

(5)



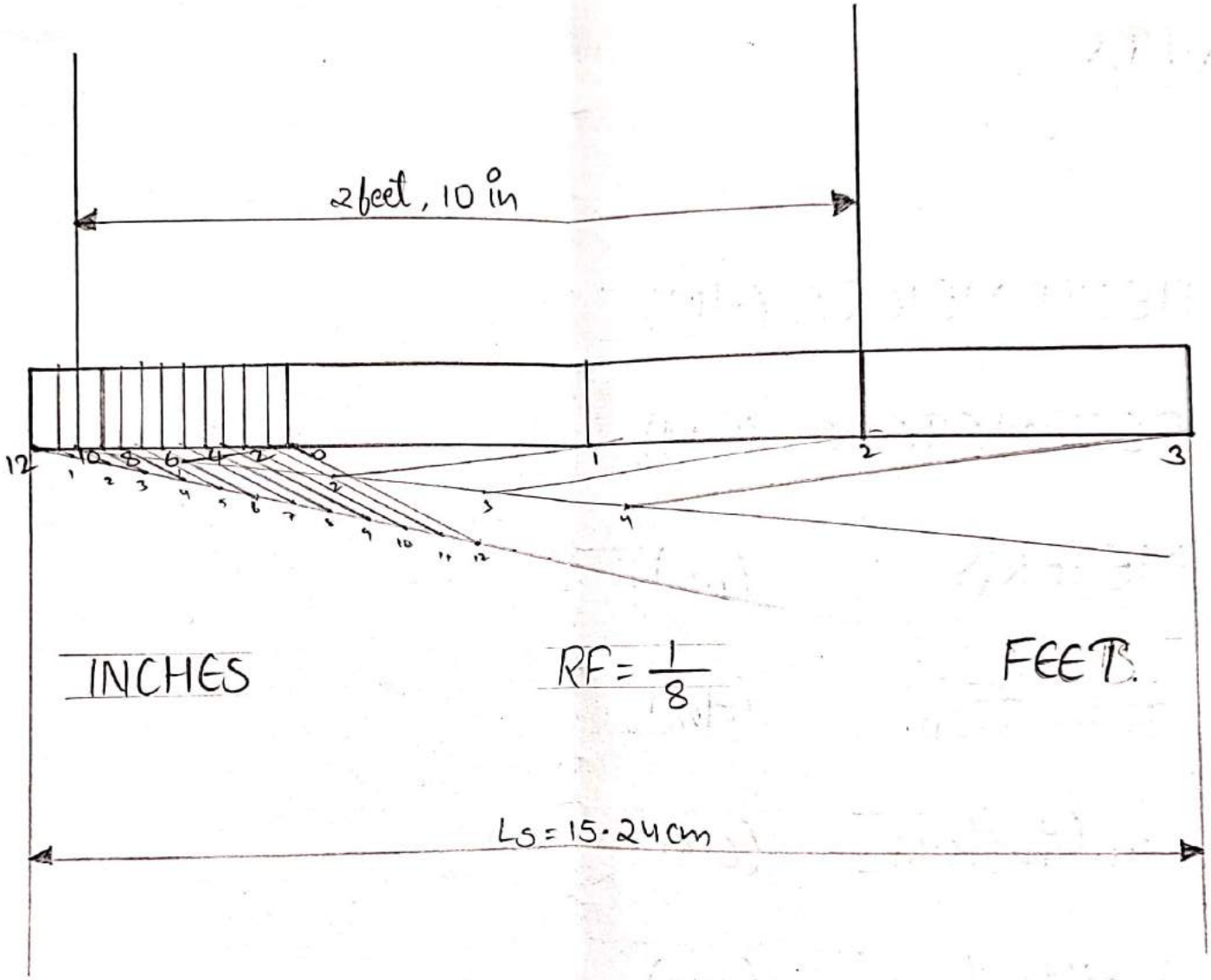
CONSTRUCTING A PLAIN SCALE.

(6)



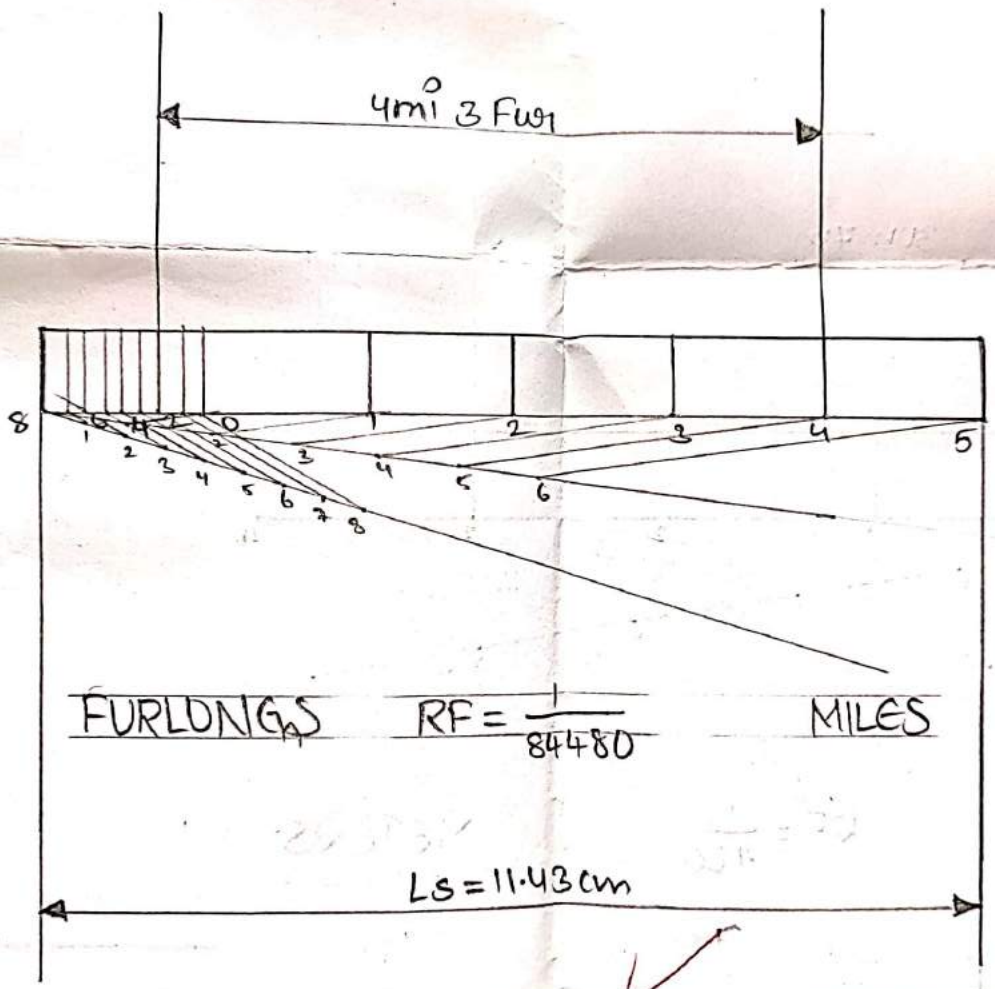
CONSTRUCTING A PLAIN SCALE.

(7)



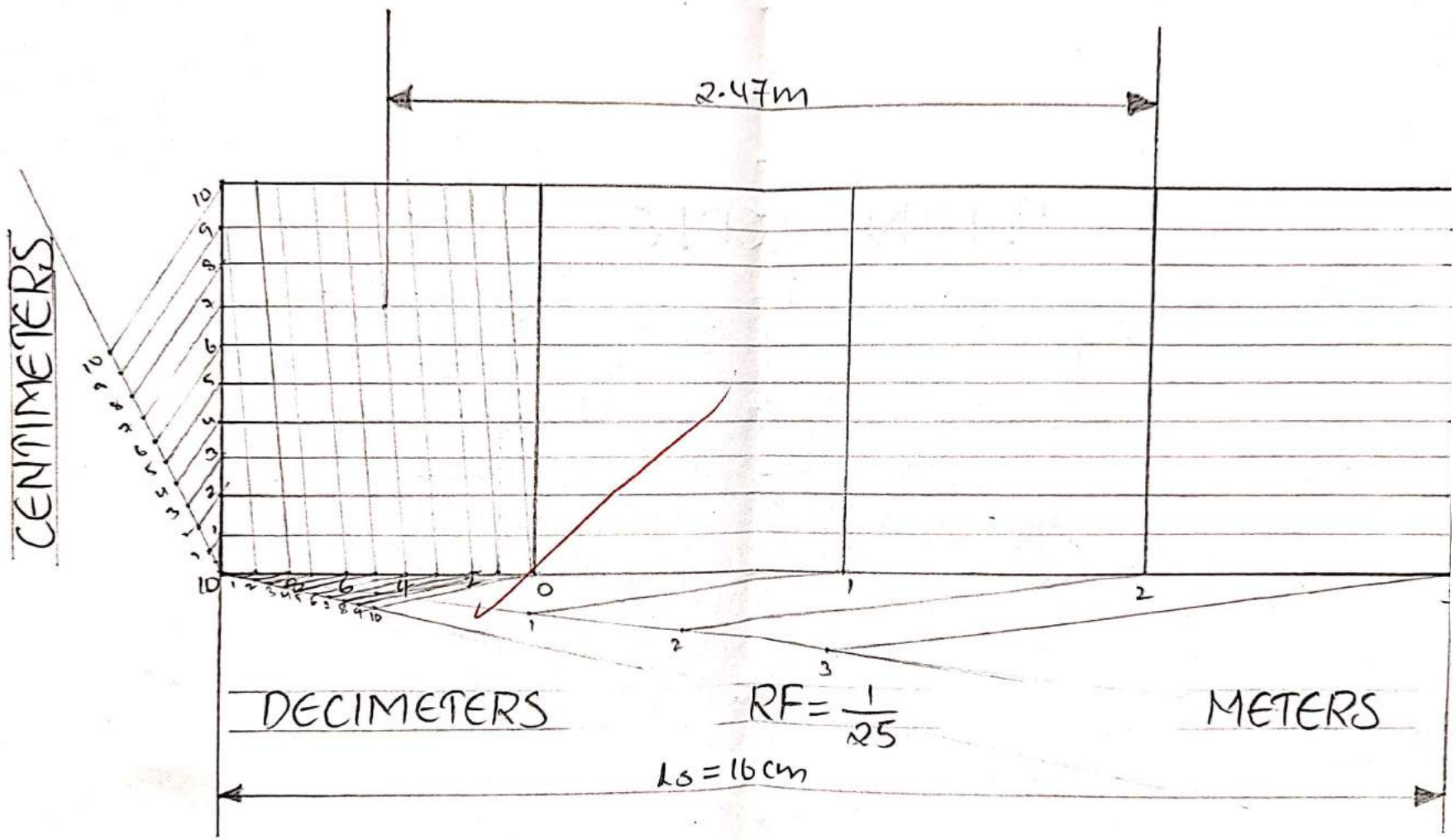
CONSTRUCTING A PLAIN SCALE.

(8)



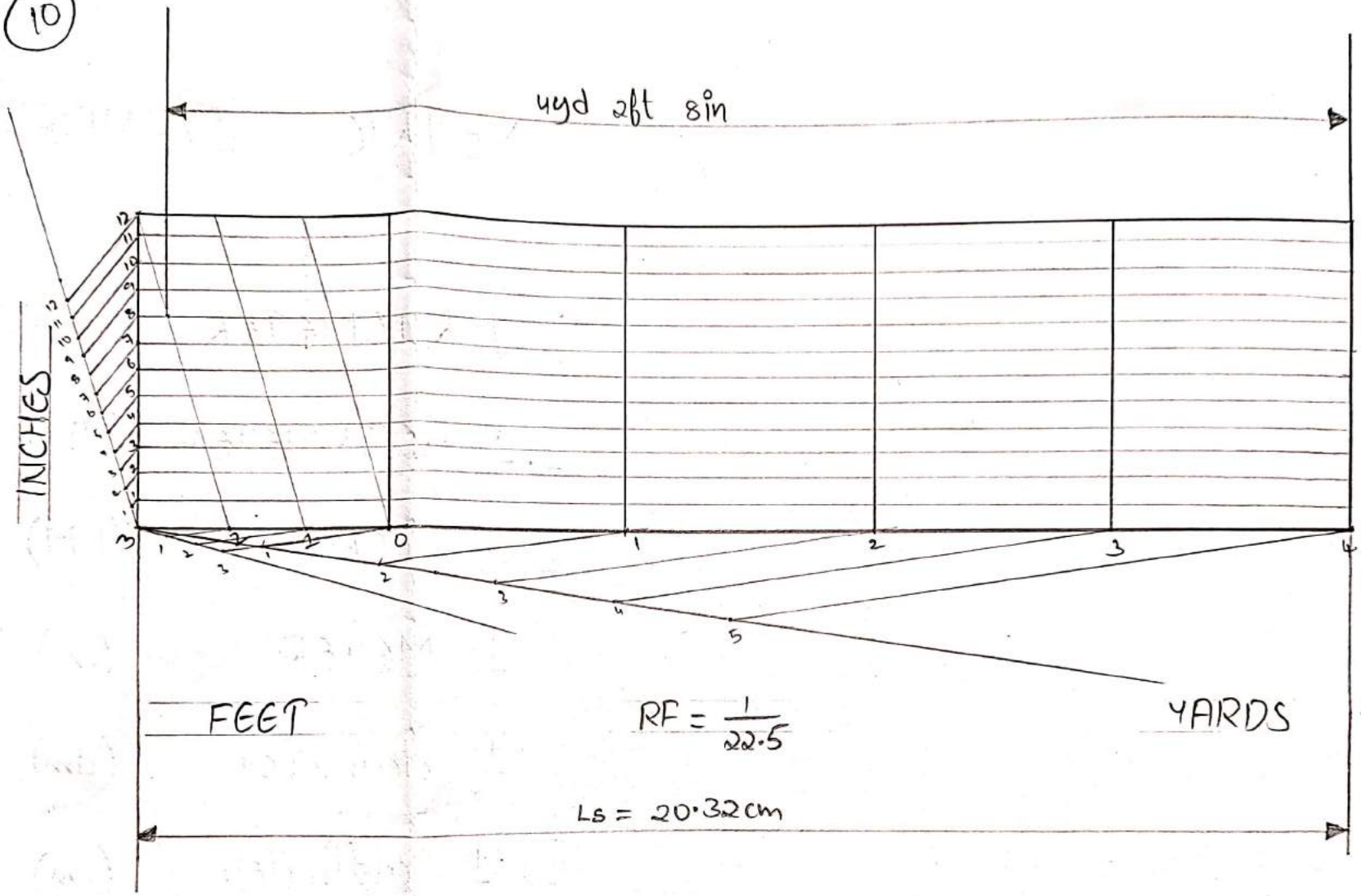
CONSTRUCTING A PLAIN SCALE.

(9)



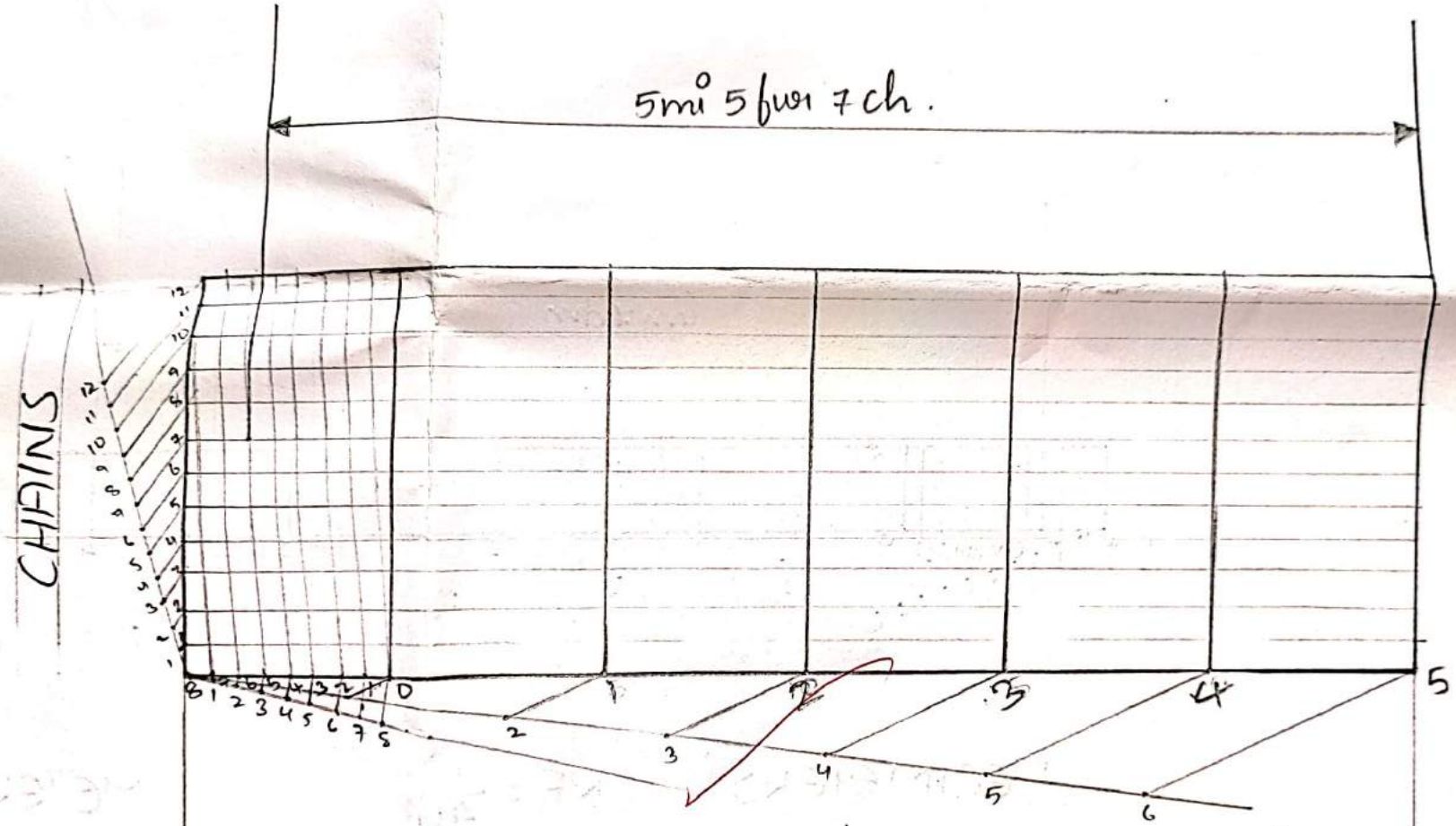
CONSTRUCTING A DIAGONAL SCALE.

10



CONSTRUCTING A DIAGONAL SCALE.

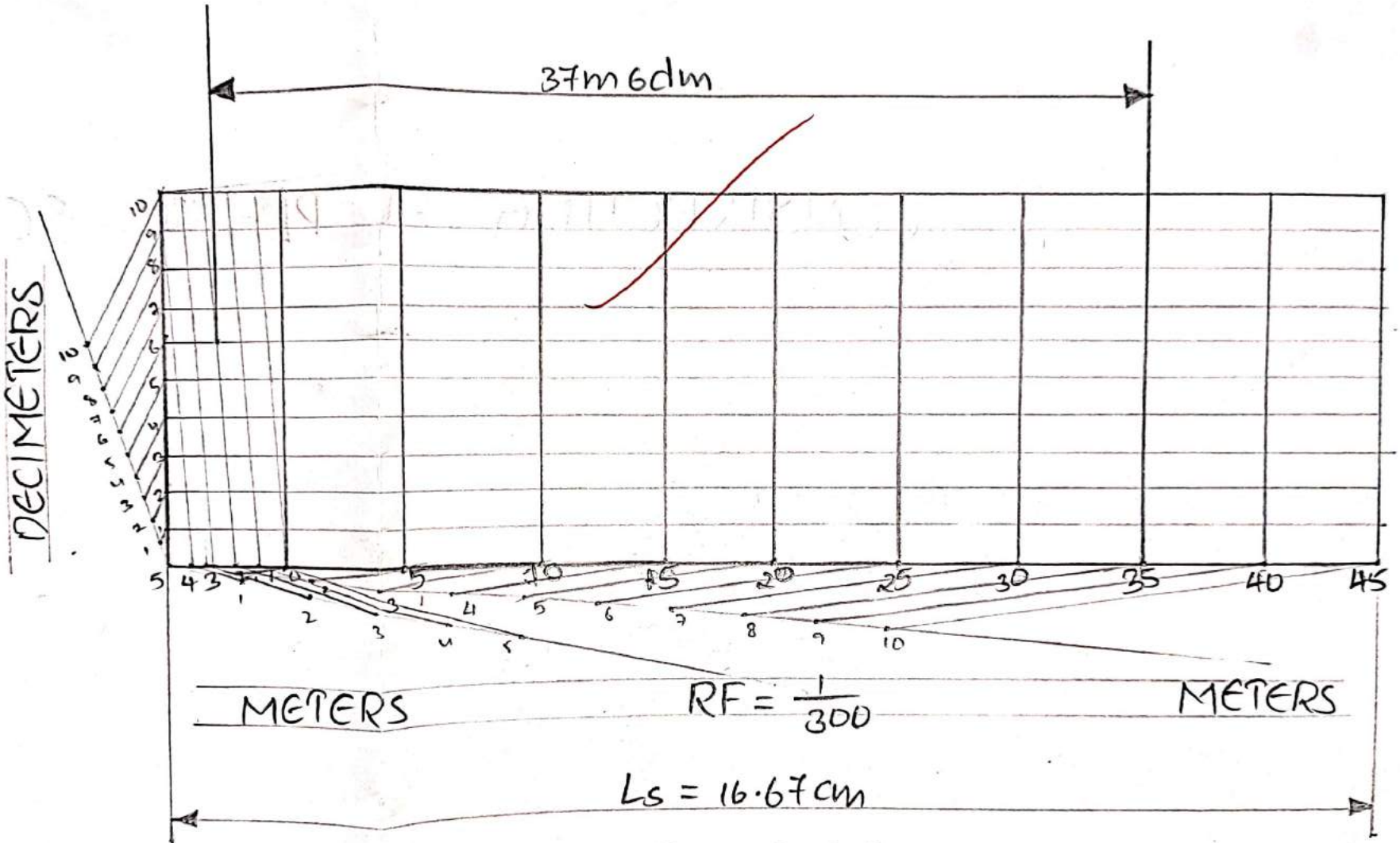
(11)



$RF = \frac{1}{63360}$

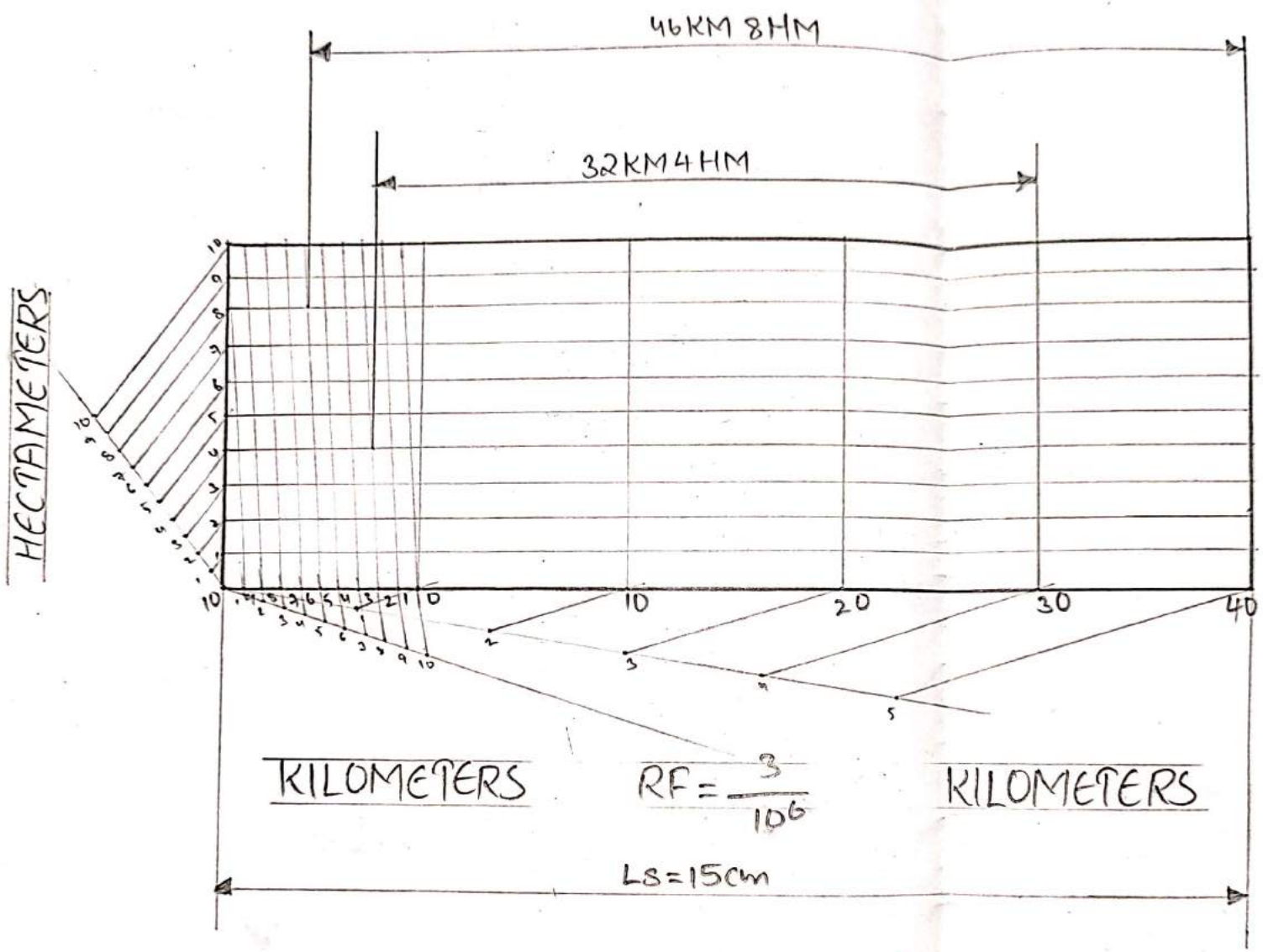
CONSTRUCTING A DIAGONAL SCALE.

(12)



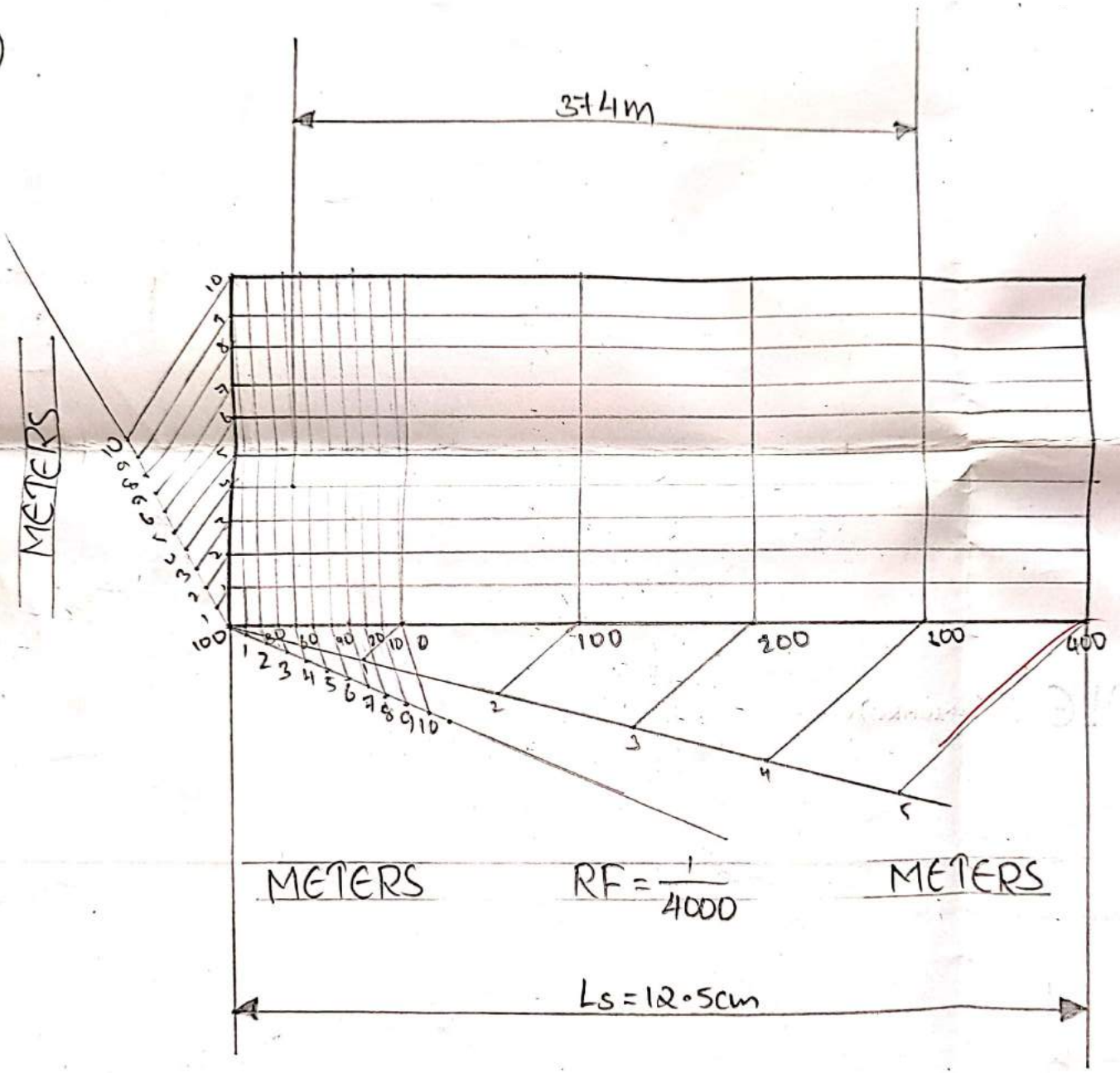
CONSTRUCTING A DIAGONAL SCALE.

(13)



TO CONSTRUCT A DIAGONAL SCALE.

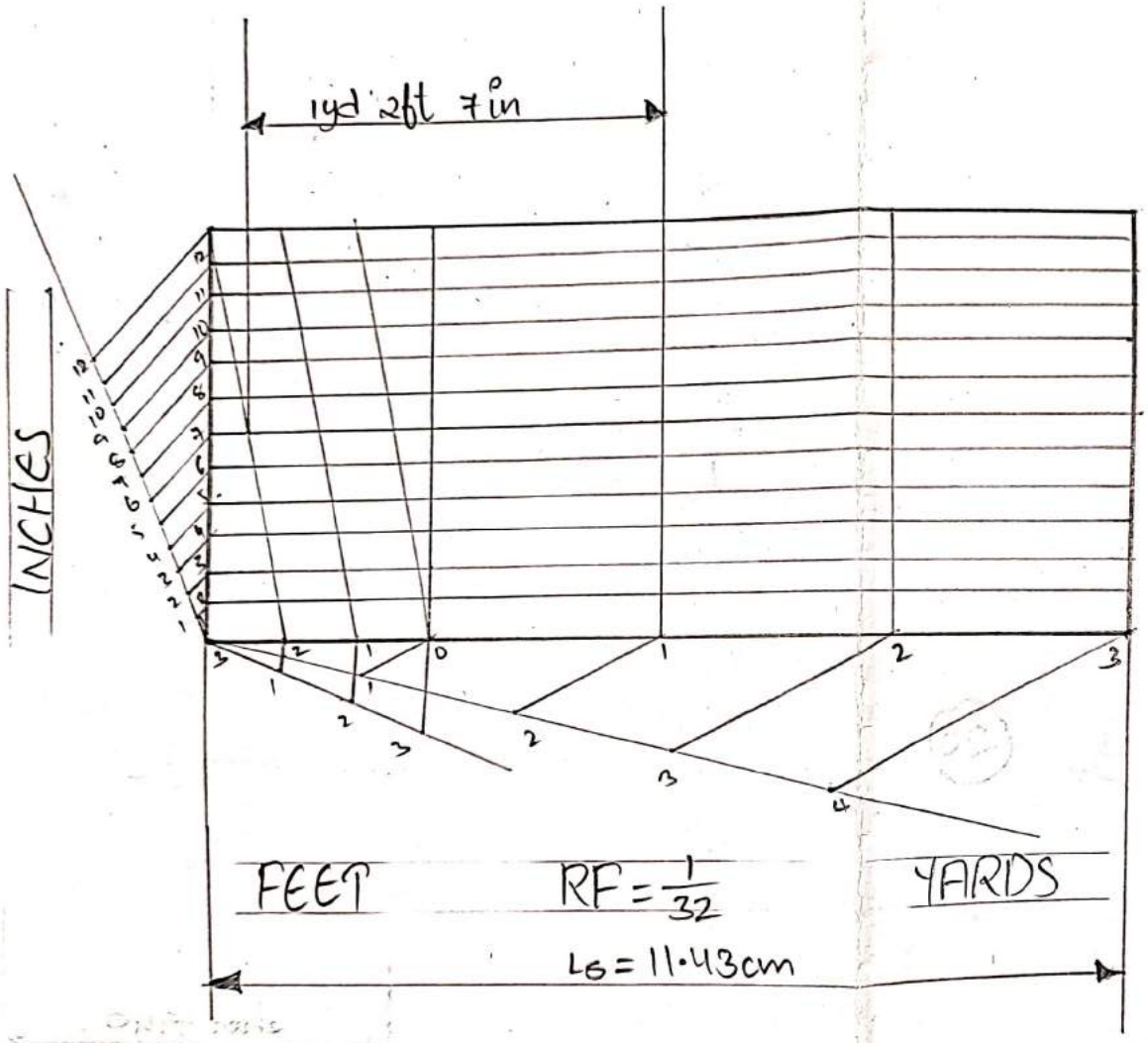
(14)



TO CONSTRUCT A DIAGONAL SCALE.

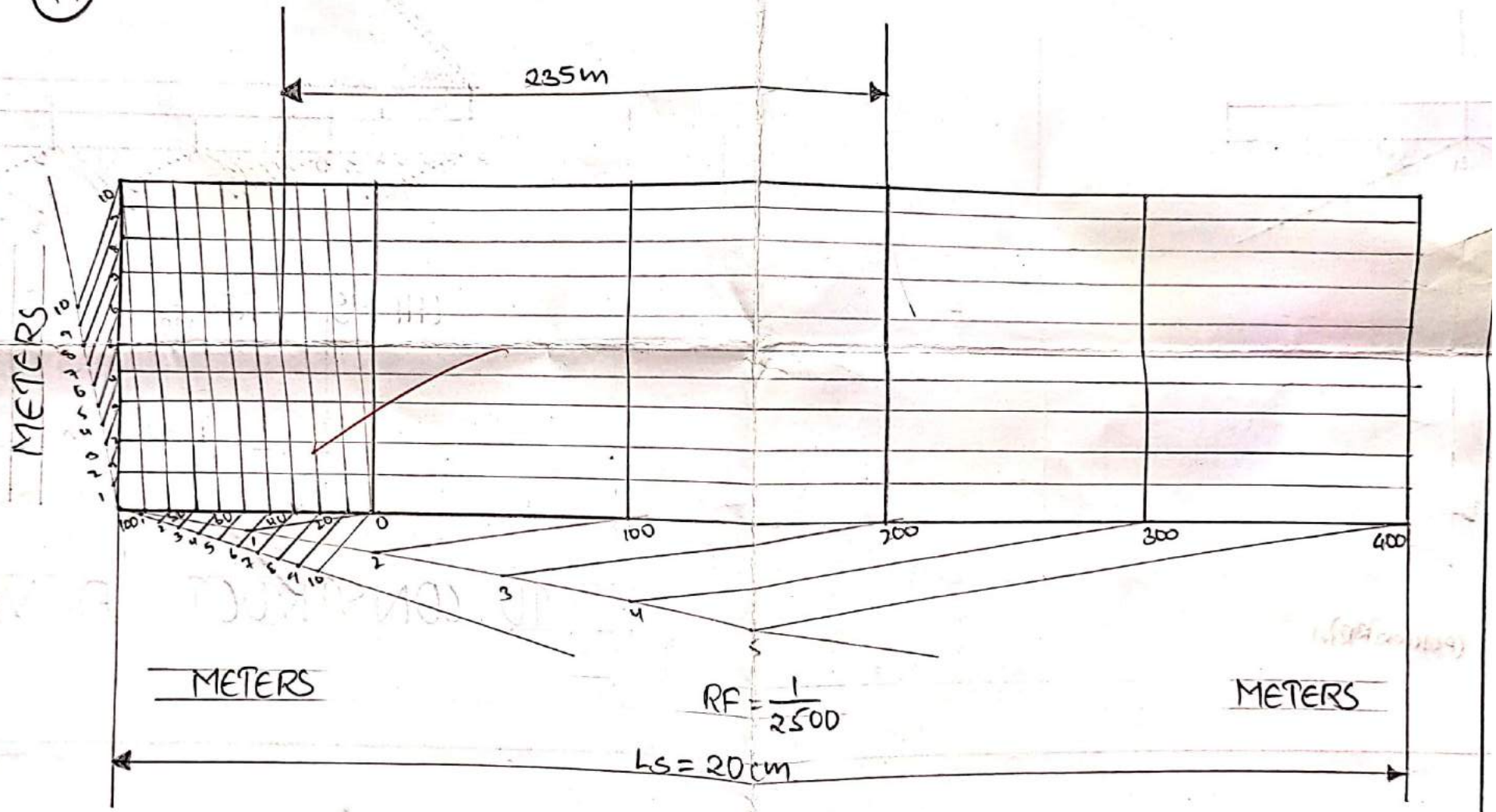
TO CONSTRUCT A DIAGONAL SCALE.

16



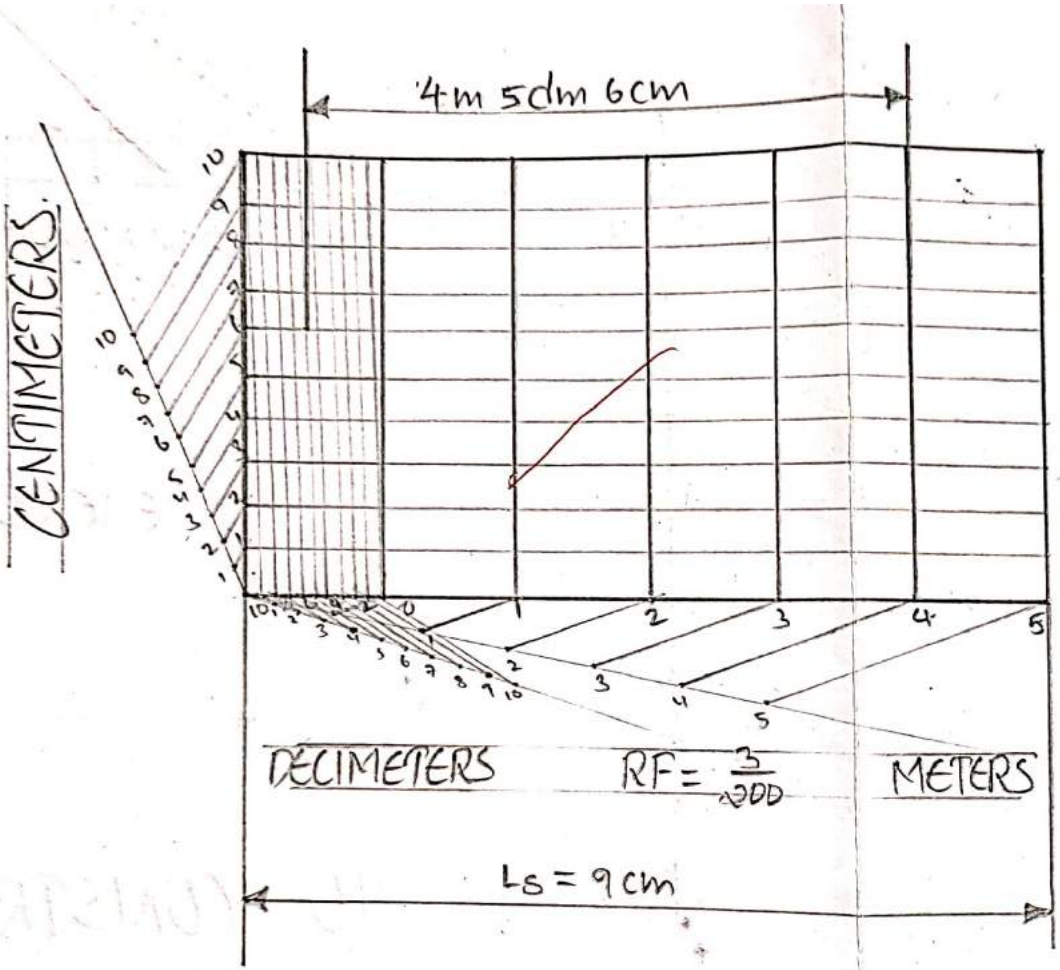
TO CONSTRUCT A DIAGONAL SCALE.

(17)



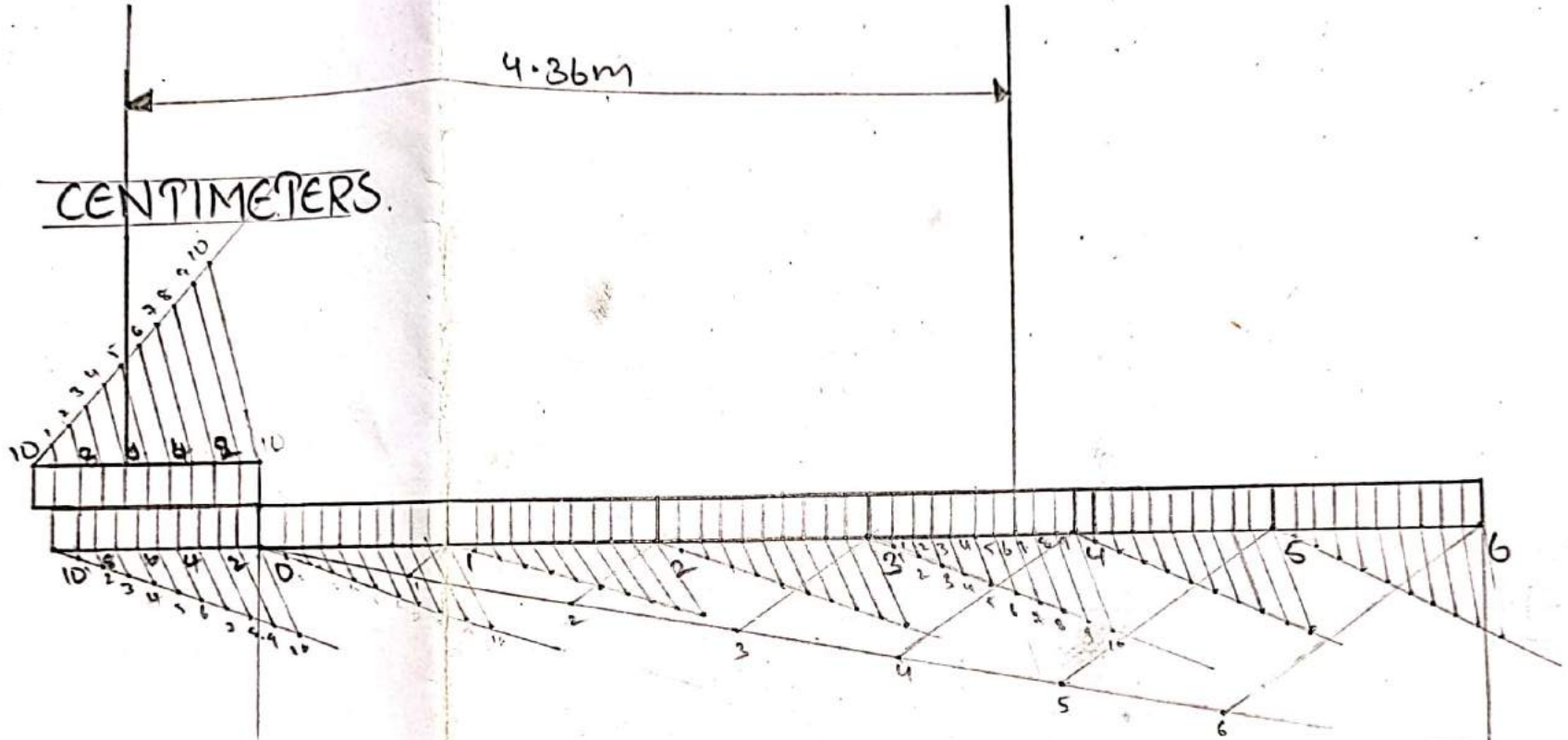
TO CONSTRUCT A DIAGONAL SCALE.

(18)

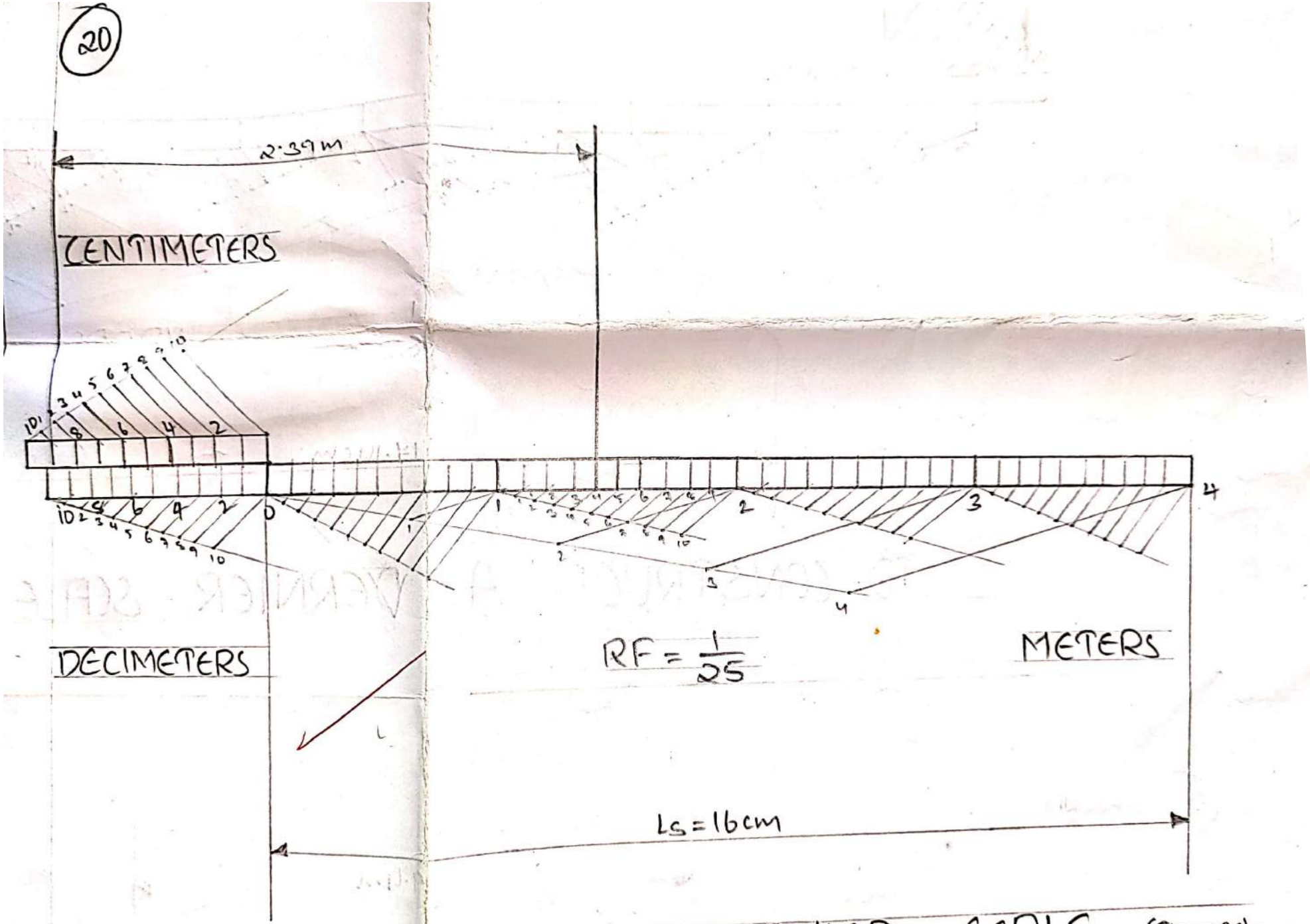


TO CONSTRUCT A DIAGONAL SCALE

(19)

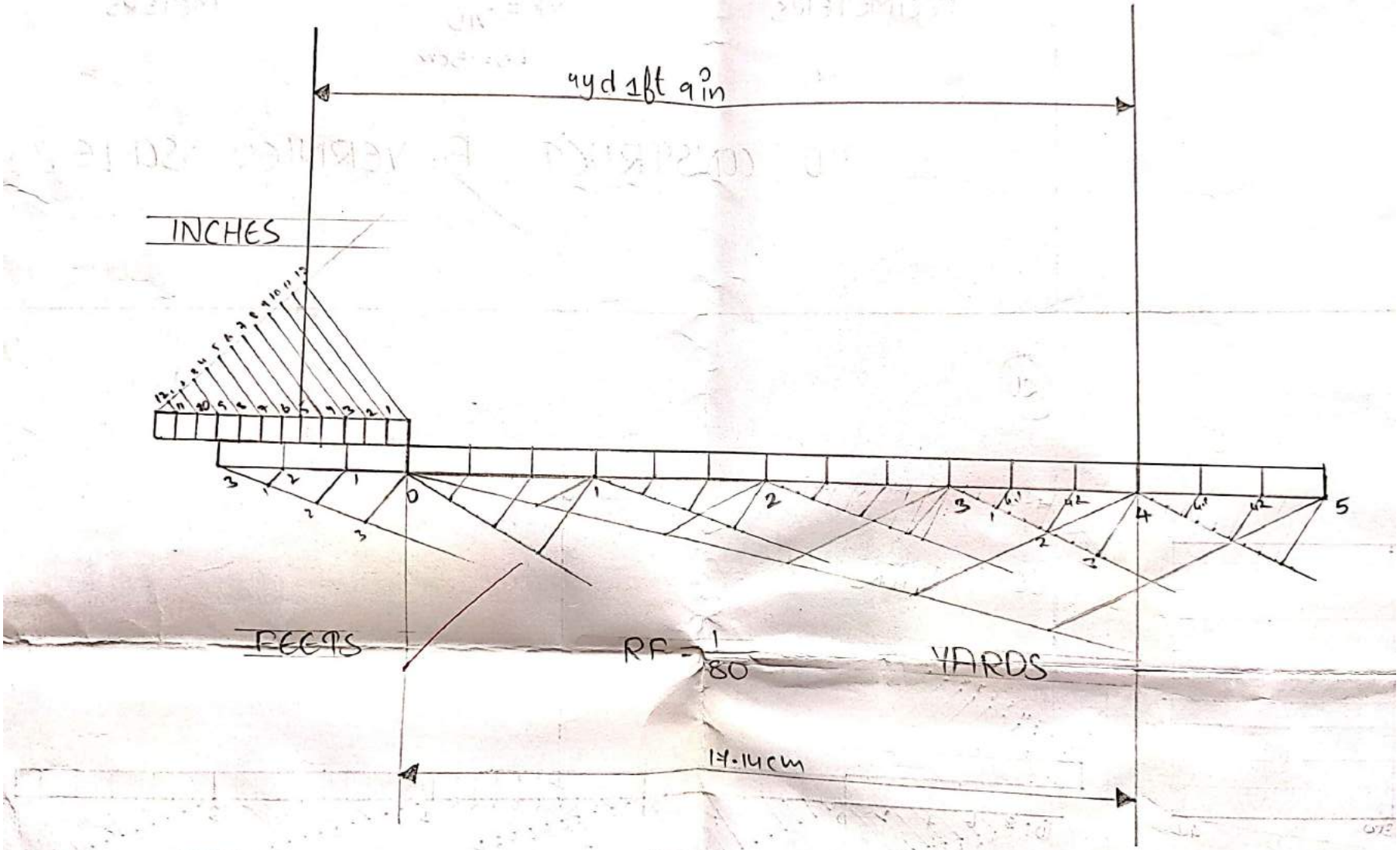


TO CONSTRUCT A VERNIER SCALE. (FORWARD)x



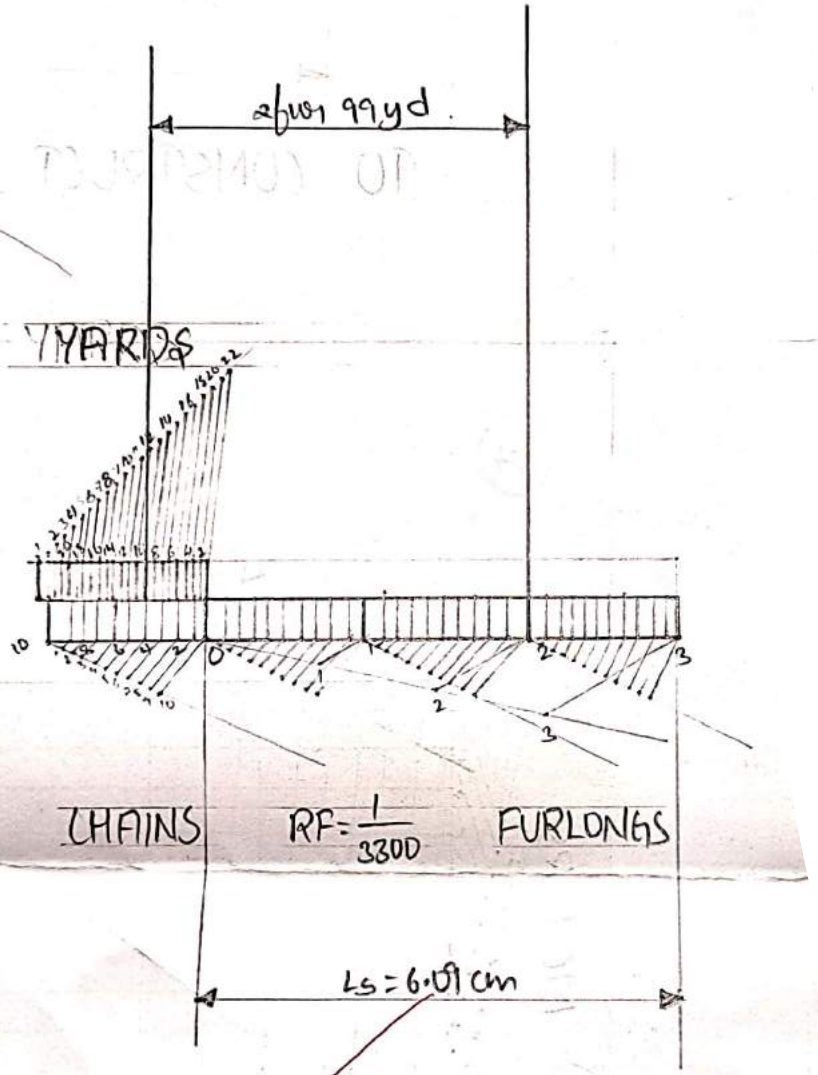
TO CONSTRUCT A VERNIER SCALE (FORWARD)

(21)



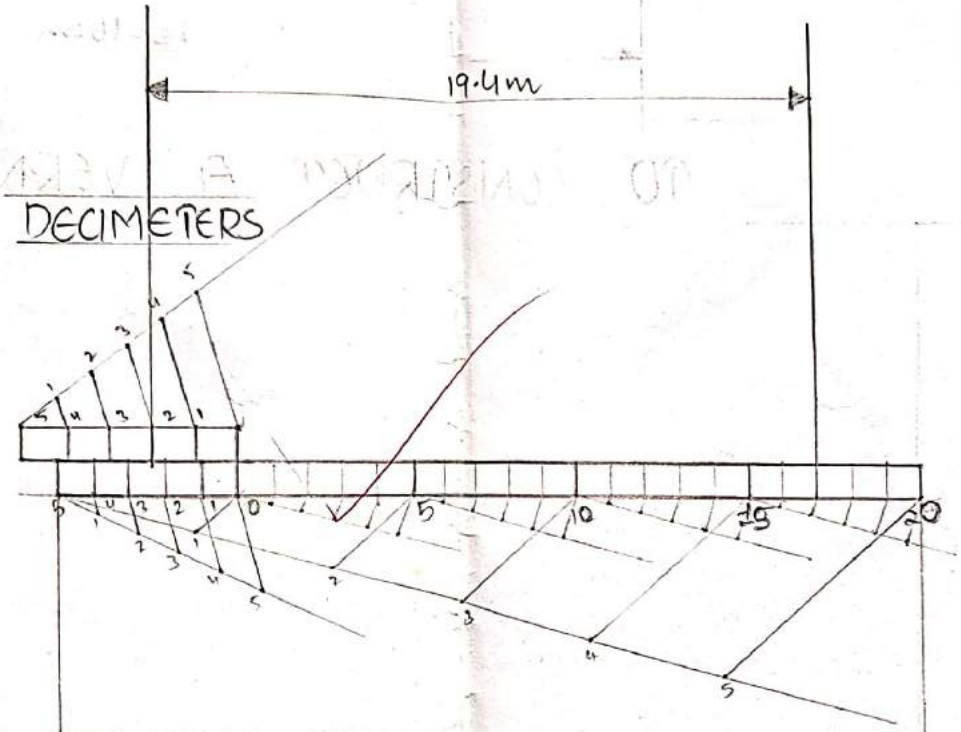
TO CONSTRUCT A VERNIER SCALE (FORWARD)

(22)



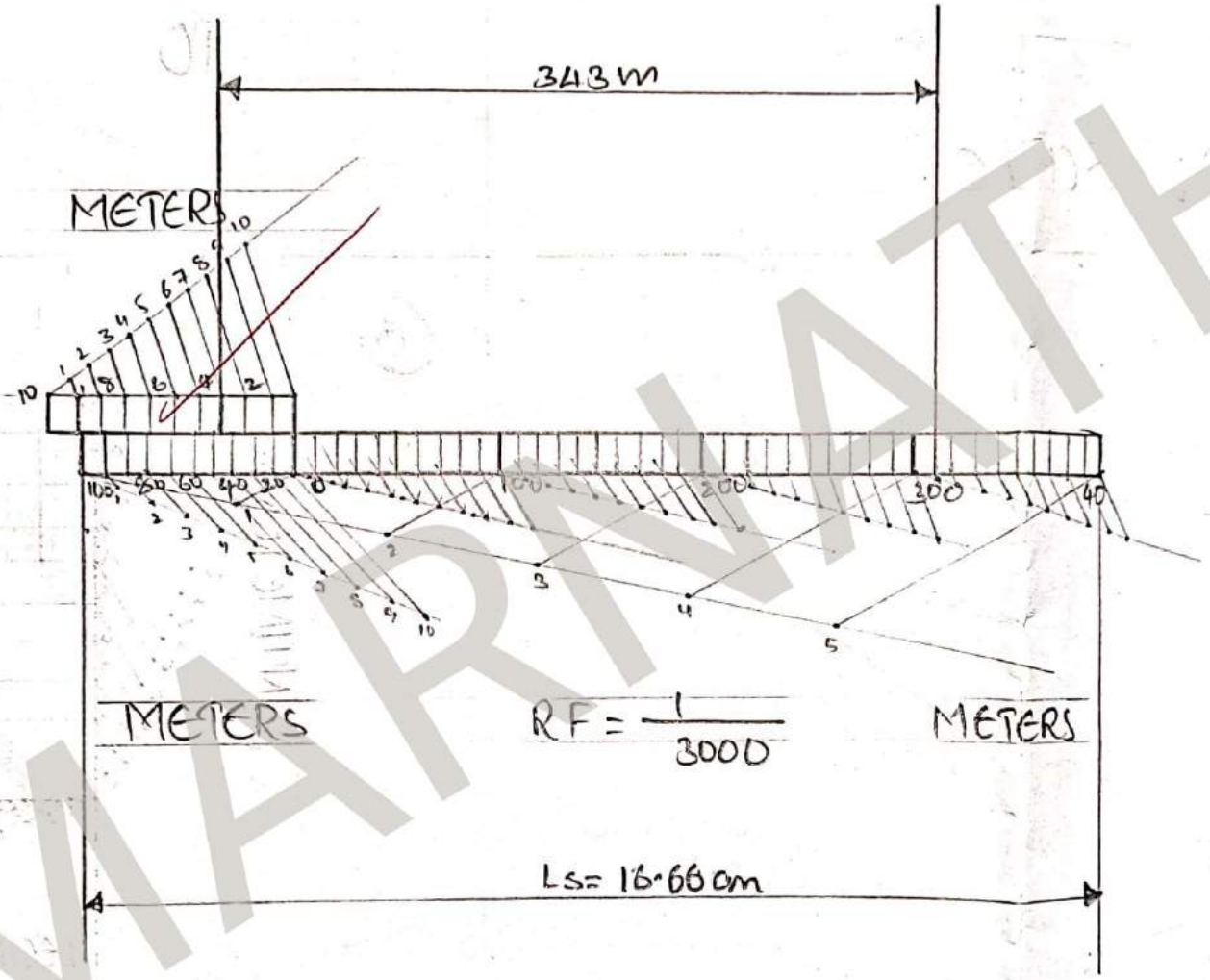
TO CONSTRUCT A VERNIER SCALE. (FORWARD)×

(23)



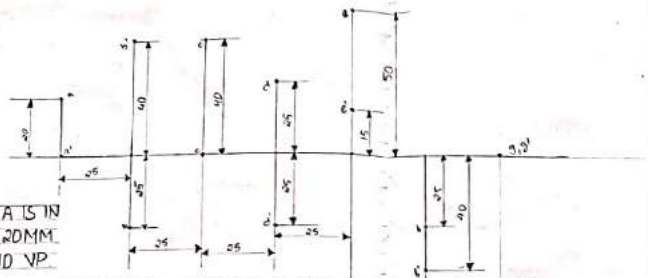
TO CONSTRUCT A VERNIER SCALE (BACKWARD)

(24)



TO CONSTRUCT A VERNIER SCALE. (BACKWARD)

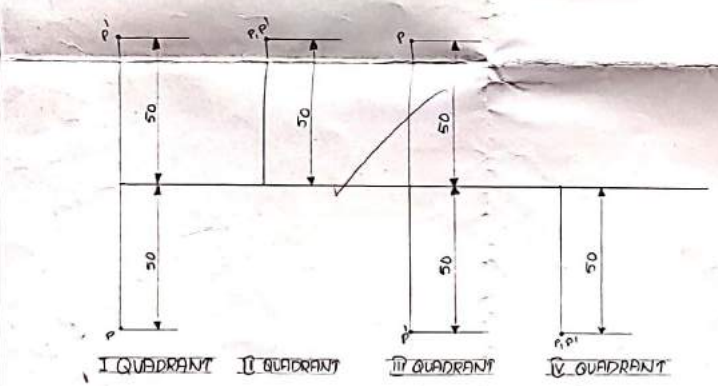
(1)



POINT A IS IN HP & 20MM BEHIND VP

POINT B IS 40MM ABOVE HP & 25MM INFRONT OF VP	POINT C IS IN VP & 40MM ABOVE HP	POINT D IS 25MM BELOW HP & 25MM BEHIND VP	POINT E IS 15MM ABOVE HP & 50MM BEHIND VP	POINT F IS 40MM BELOW HP & 25MM INFRONT OF VP	POINT G IS IN VP & HP

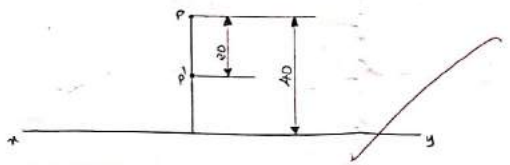
(2)



I QUADRANT | II QUADRANT | III QUADRANT | IV QUADRANT

A POINT P IS 50MM FROM BOTH THE REFERENCE PLANES.

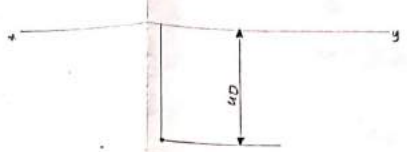
(3) (a)



IT LIES IN QUADRANT - II

A POINT P; ITS TOP VIEW IS 40MM ABOVE XY; THE FRONT VIEW, 20MM BELOW THE TOP VIEW.

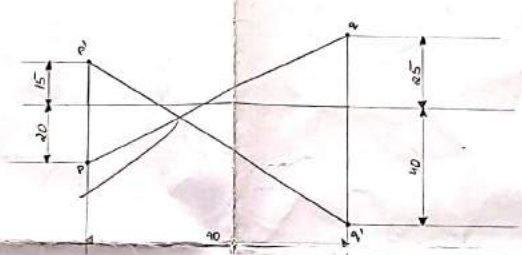
(3) (b)



IT LIES IN QUADRANT - IV

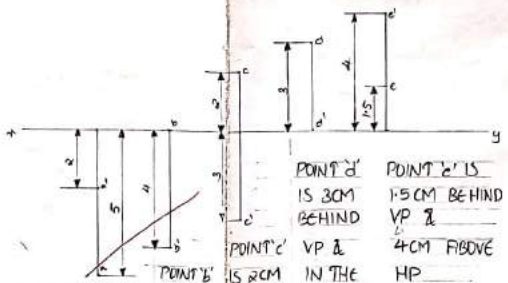
POINT Q, ITS PROJECTIONS COINCIDE WITH EACH OTHER 40MM BELOW XY.

(4)



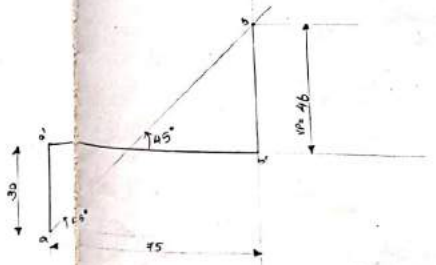
P IS 15MM ABOVE HP & 20MM IN FRONT OF VP
Q IS 25MM BEHIND THE VP & 40MM BELOW HP

(5)



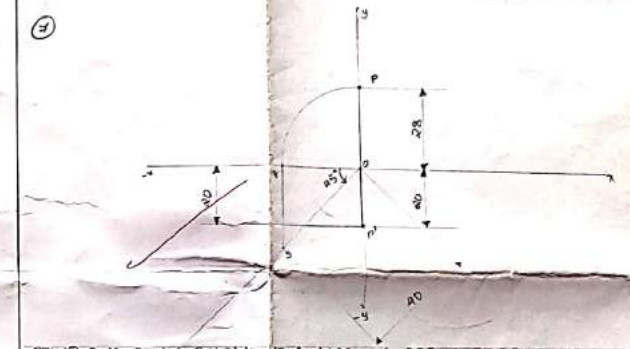
POINT 'a' IS 2CM BELOW HP & 5CM IN FRONT OF VP	POINT 'b' IS IN VP & 4CM BELOW HP	POINT 'c' IS 2CM BEHIND VP & 3CM BELOW HP	POINT 'd' IS 3CM BEHIND VP & IN THE HP	POINT 'e' IS 1.5CM BEHIND VP & 4CM ABOVE HP

(6)



POINT 'b' IS 40MM BEHIND THE VP & IN THE HP.
POINT 'a' IS 30MM INFRONT OF VP & IN THE HP
LINE JOINING THE TOP VIEWS MAKE 45° WITH XY.

(7)



POINT P IS 20MM BELOW HP & LIES IN 3RD QUADRANT. ITS SHORTEST DISTANCE FROM XY PLANE IS 40MM.

(8)

10/10

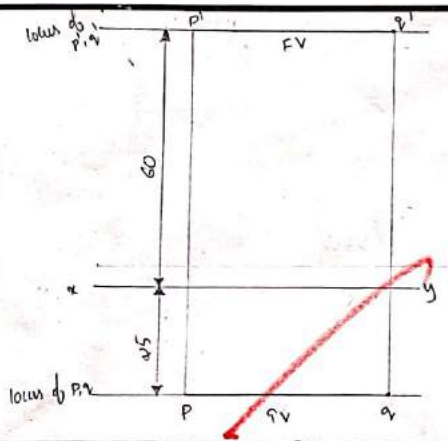
13 Titles

ALL DIMENSIONS ARE IN MM

MAHATMA GANDHI INSTITUTE OF TECHNOLOGY
GANDIPET, HYDERABAD - 500 075

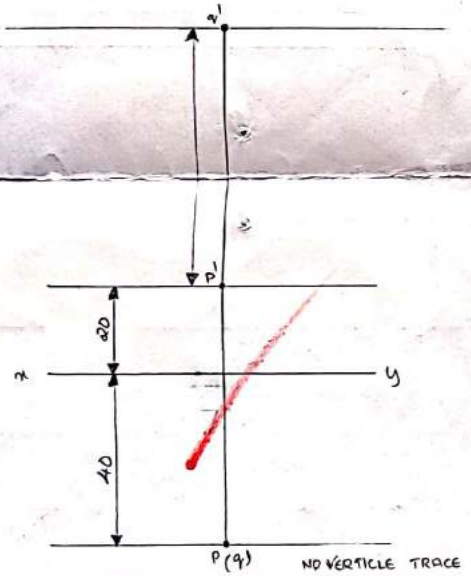
TITLE: PROJECTION OF POINTS	
NAME: G. AMARNATH	
CLASS: ECE-2	SCALE: 1:1
ROLL No. 166A0470	DATE: 27/09/2019 SHEET No: 08

(1)



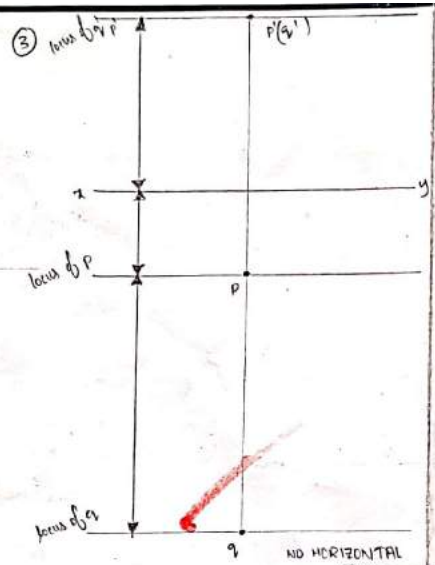
LINE IS PARALLEL TO BOTH HP & VP

(2)



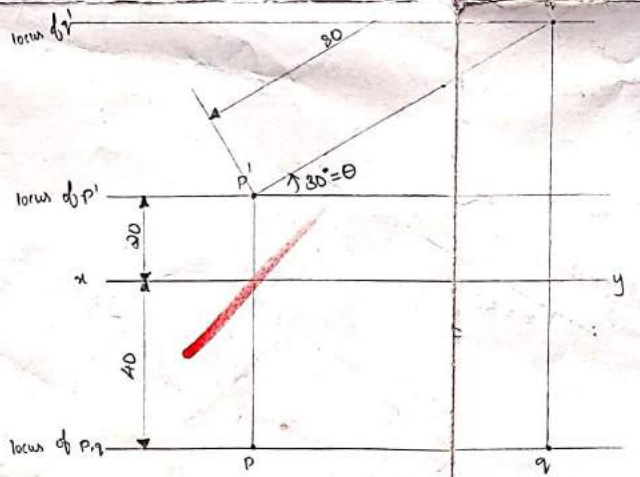
LINE IS PERPENDICULAR TO HP & PARALLEL TO VP

(3)



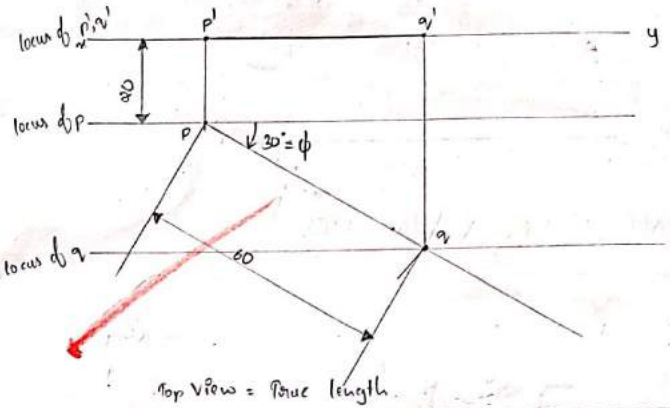
LINE IS PERPENDICULAR TO VP & PARALLEL TO HP

(4)



THE LINE IS INCLINED θ TO HP & PARALLEL TO VP.

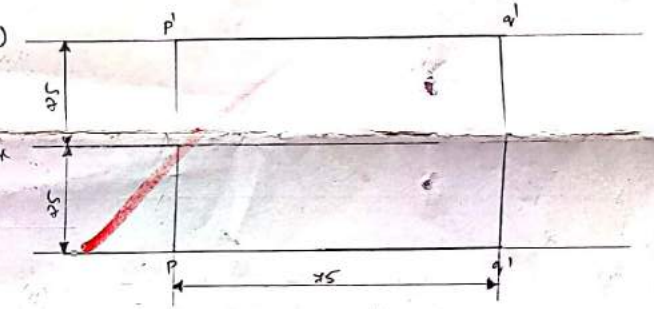
(5)



LINE INCLINED TO VP & PARALLEL TO HP

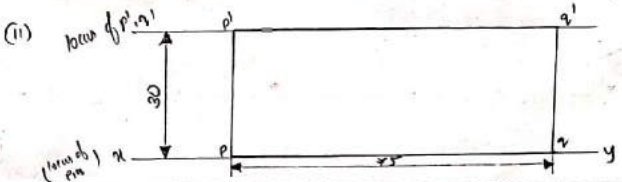
10(a) Pg 200

(i) (a)



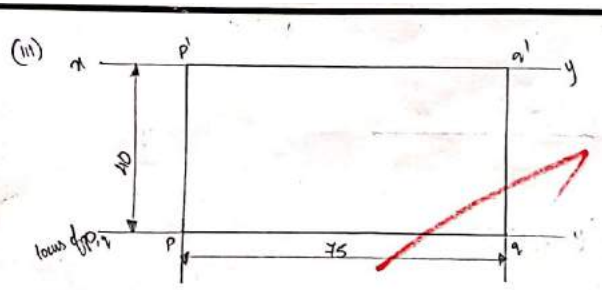
LINE IS PARALLEL TO BOTH HP & VP.

(ii)

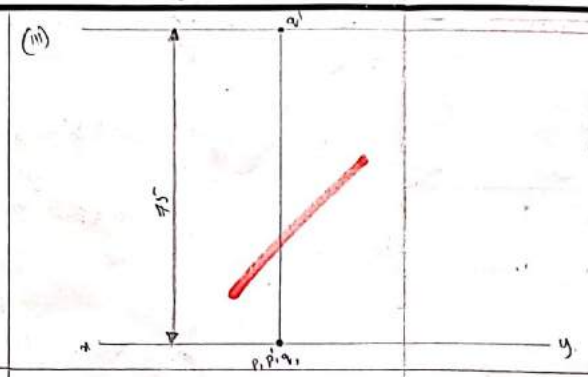


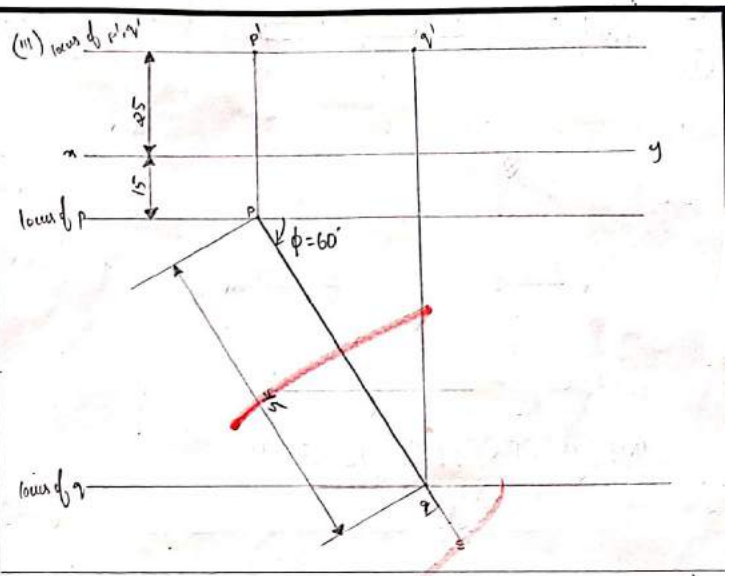
LINE IS PARALLEL TO HP & IN VP

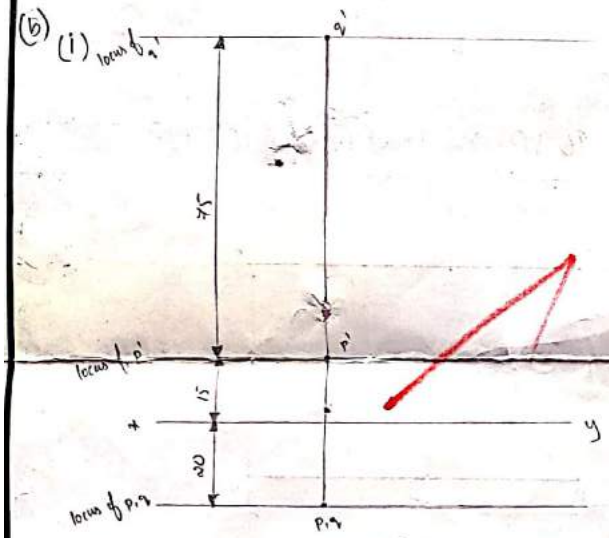
COLLEGE : MGIT		
TITLE : LINES INCLINED IN ONE PLAIN		
NAME :	AMARNATH	
ROLL NO. 19261A 0470	BRANCH	ECE-02
SECTION 02	PLATE	09

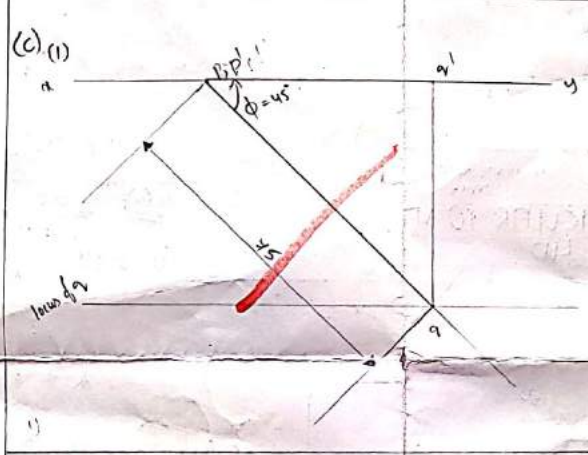


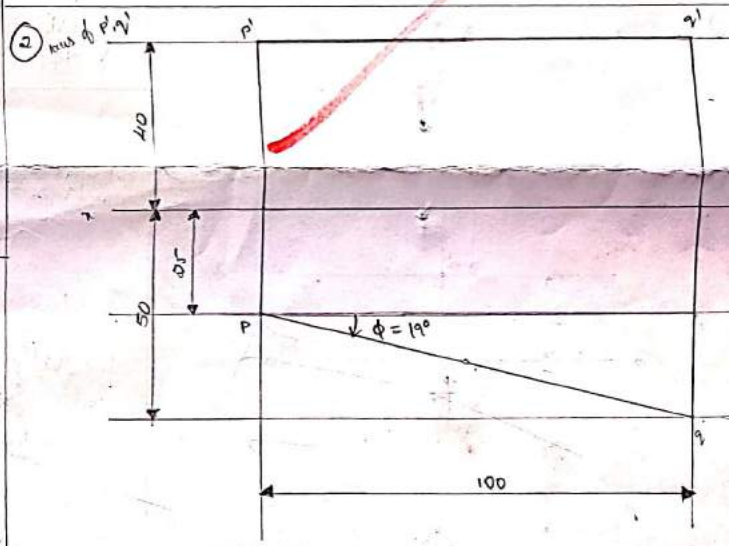
INFRONT OF VP & IN HP

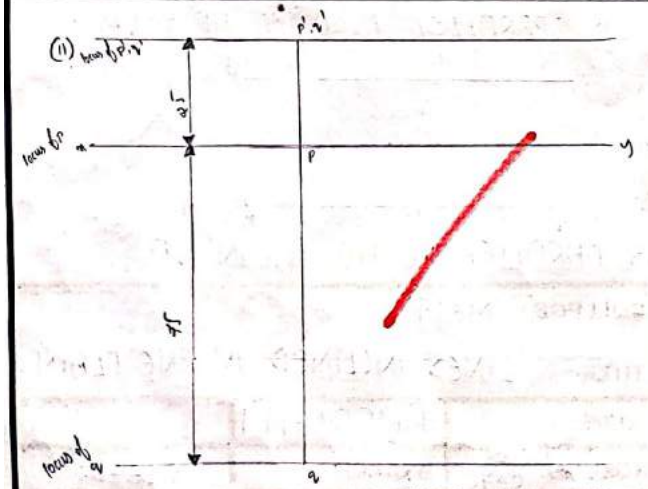


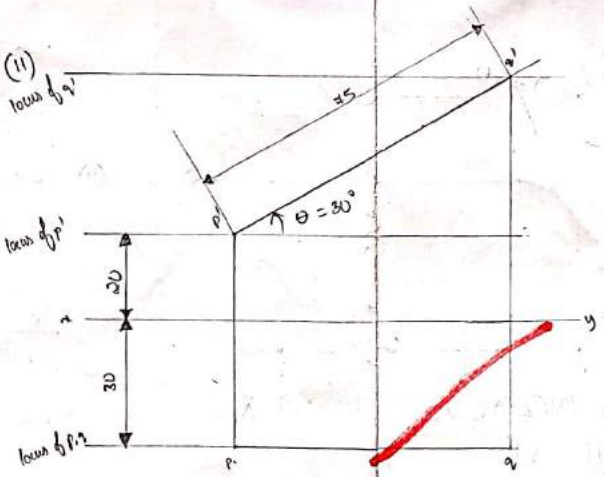






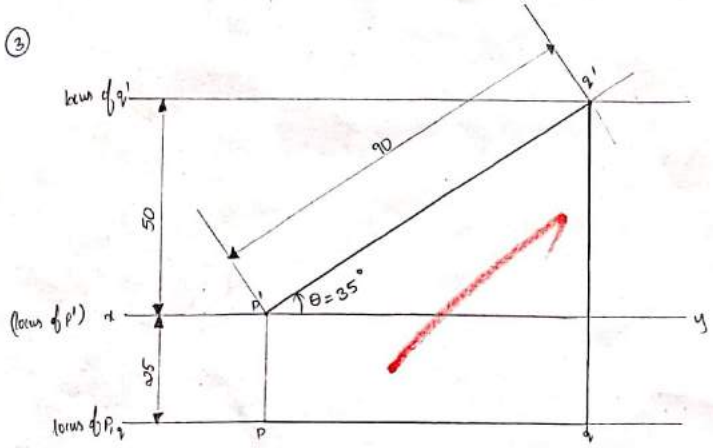


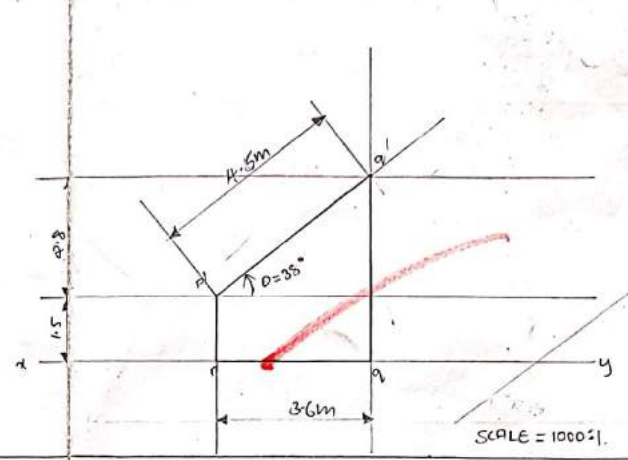


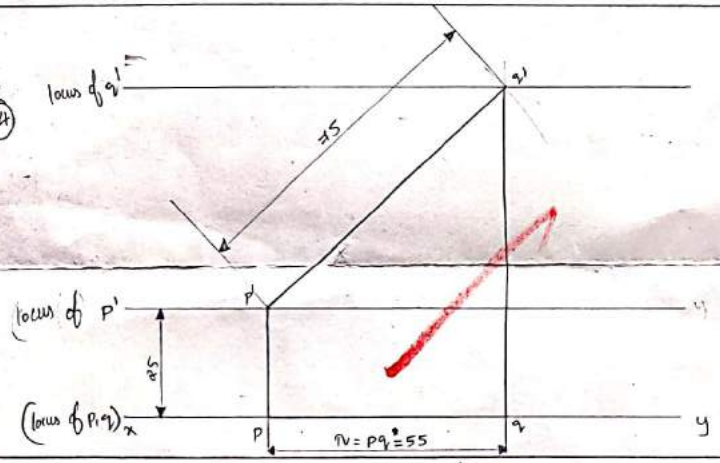


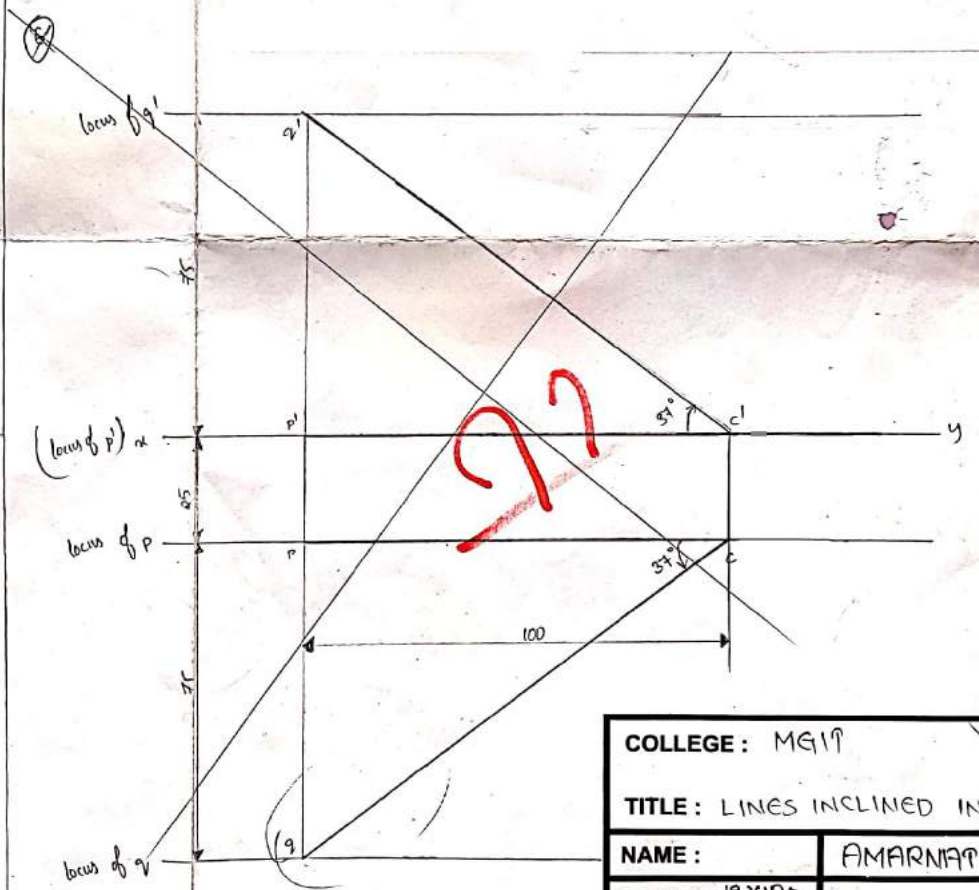
ALL DIMENSIONS ARE IN MM.

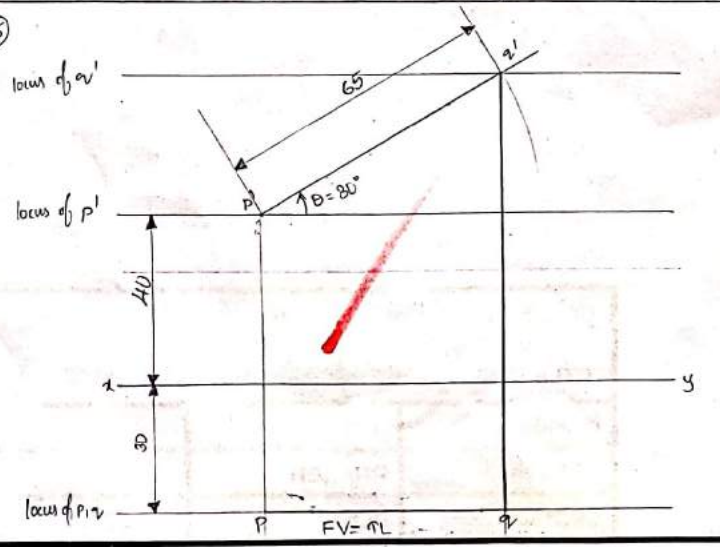
COLLEGE :		
TITLE :		
NAME :		
ROLL NO.	BRANCH	
SECTION	PLATE	





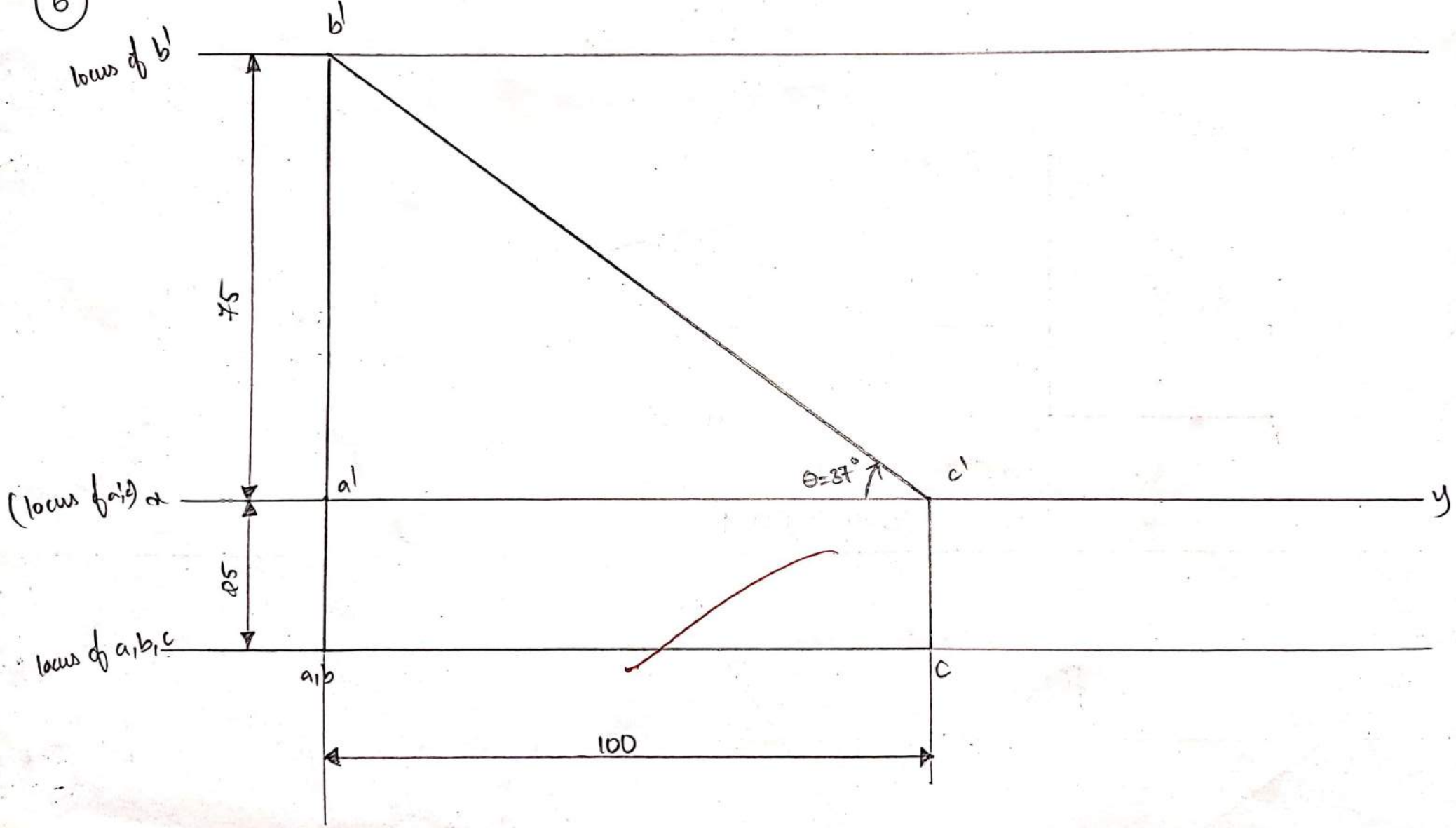




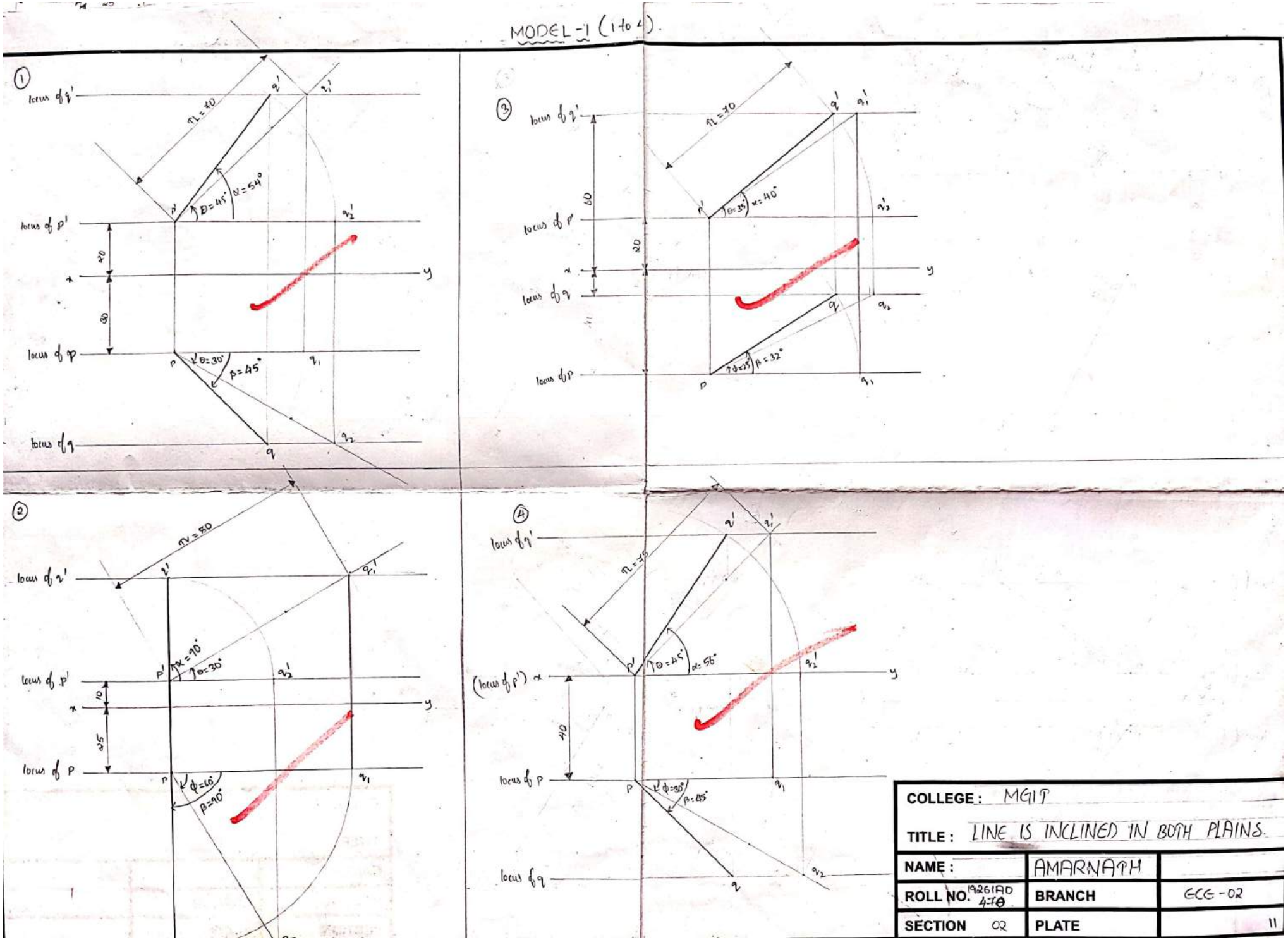


COLLEGE : MGIT		
TITLE : LINES INCLINED IN ONE PLAIN		
NAME :	AMARNATH	
ROLL NO. 19261A0470	BRANCH	ECE-02
SECTION 02	PLATE	10

(6)

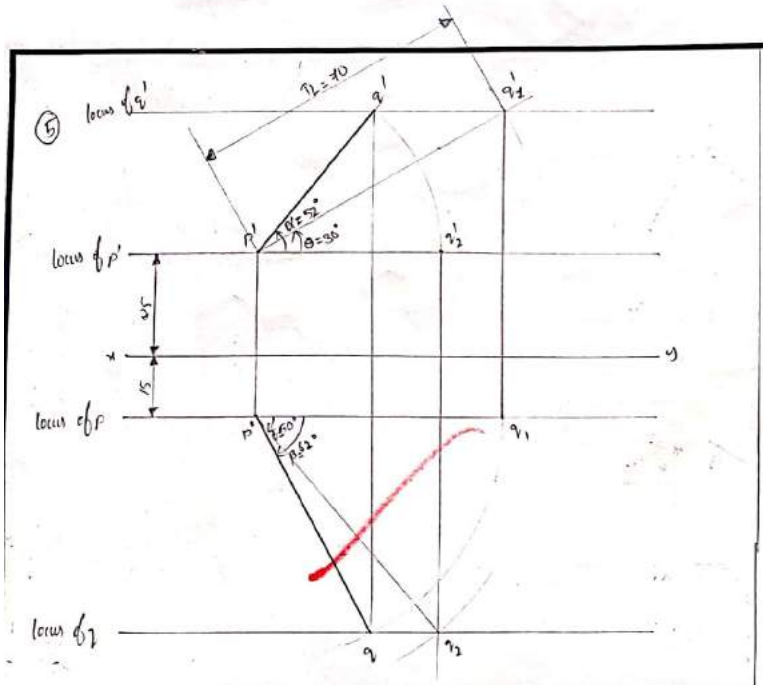


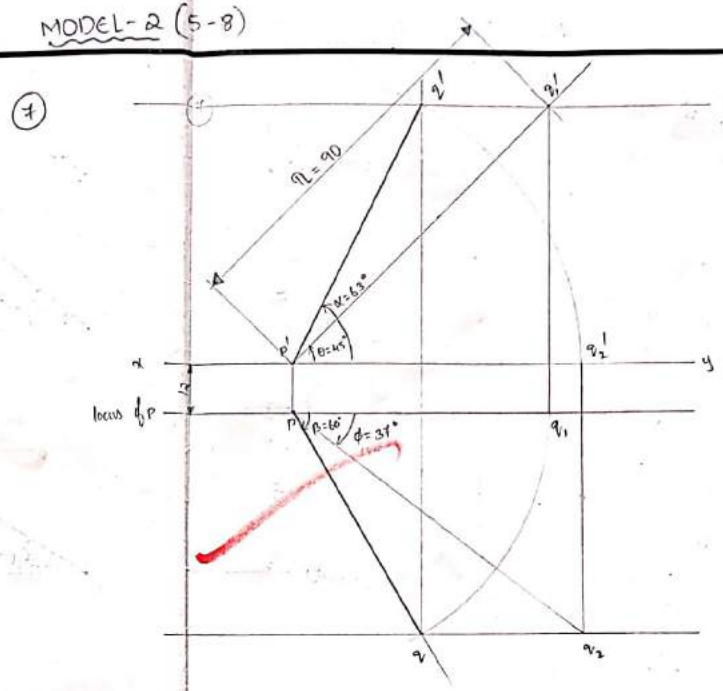
MODEL-1 (1 to 4).

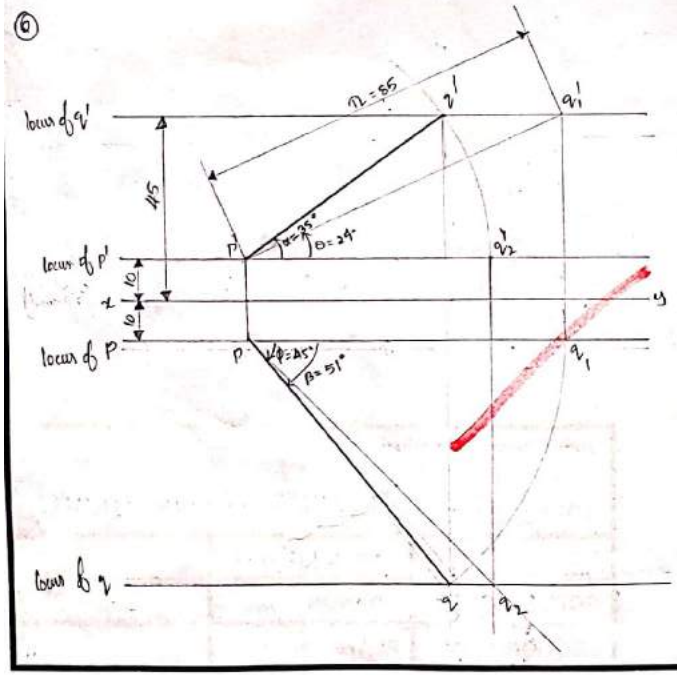


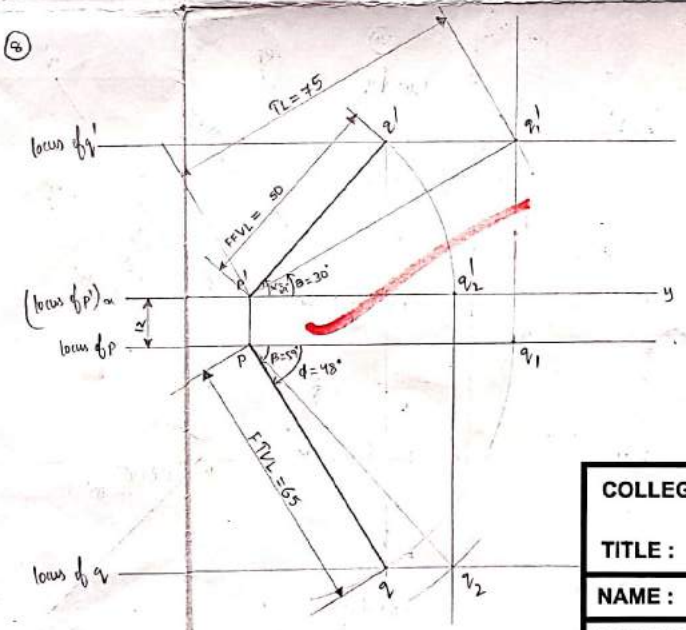
COLLEGE : MGIT		
TITLE : LINE IS INCLINED IN BOTH PLAINS.		
NAME :	AMARNATH	
ROLL NO. 19261A04H0	BRANCH	ECE - 02
SECTION 02	PLATE	11

MODEL-2 (5-8)





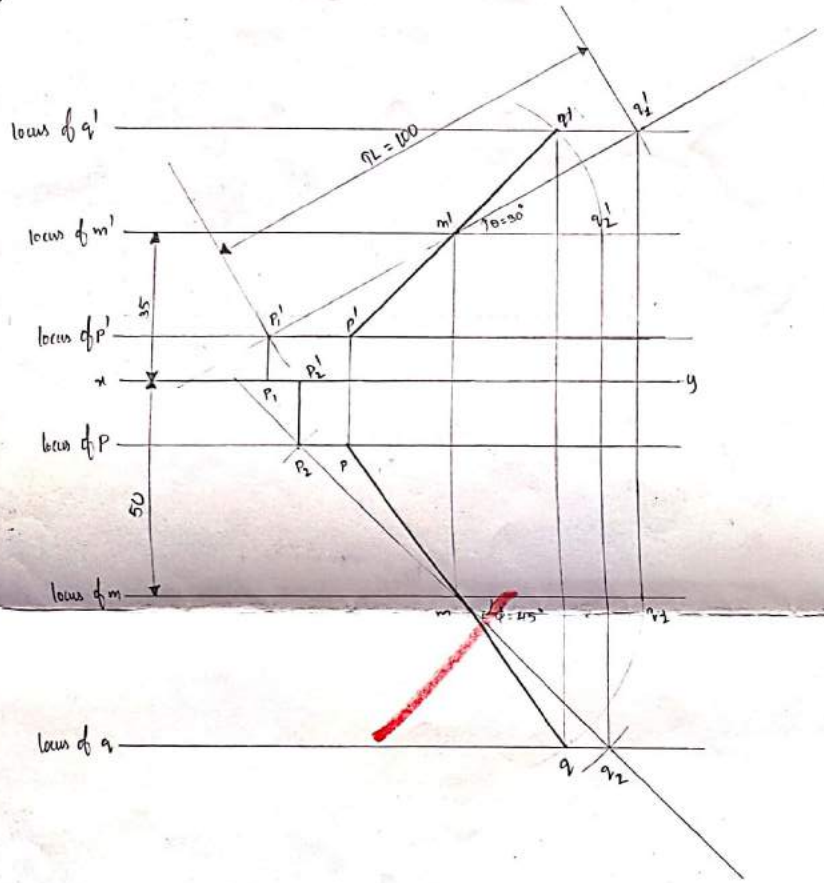




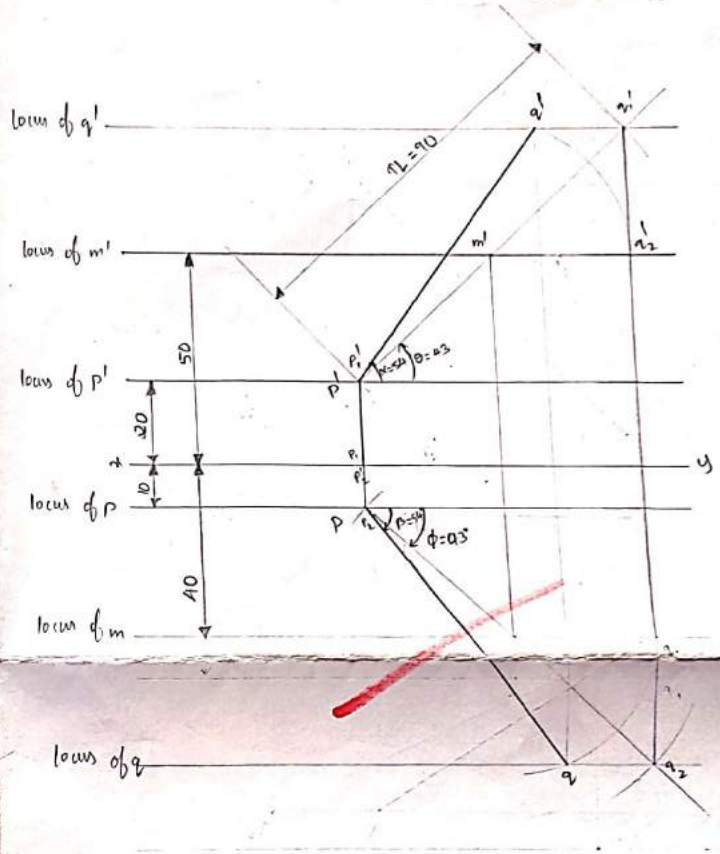
COLLEGE :		
TITLE :		
NAME :		
ROLL NO.	BRANCH	
SECTION	PLATE	

MODEL-3 (9,10) MID POINT PROBLEMS

(9)



(10)



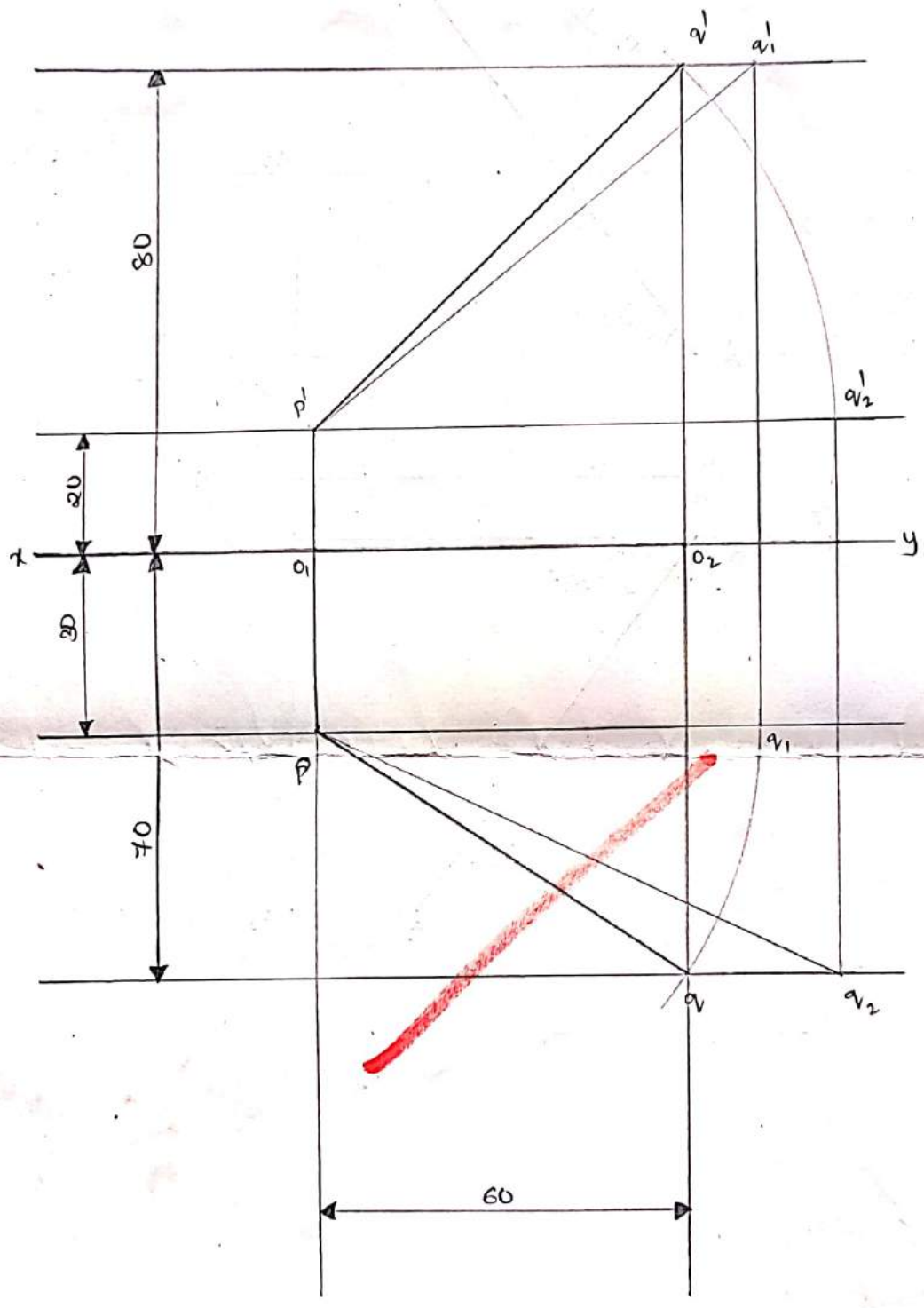
(10)

Sign 13/11/18

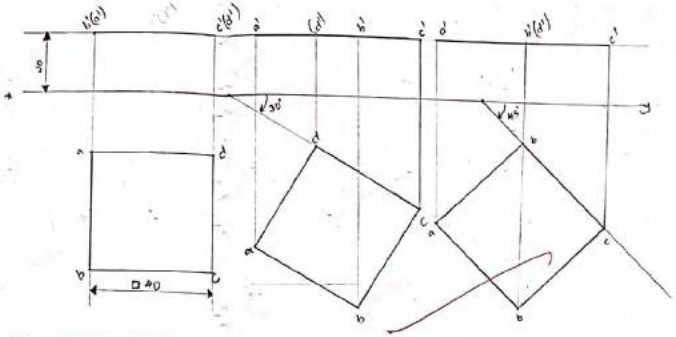
COLLEGE : MGIT		
TITLE : LINE IS INCLINED IN BOTH PLAINS		
NAME :	AMARNATH	
ROLL NO. 19261A0470	BRANCH	ECE -02
SECTION 02	PLATE	

MODEL-4 END PROJECTORS PROBLEM.

(11)

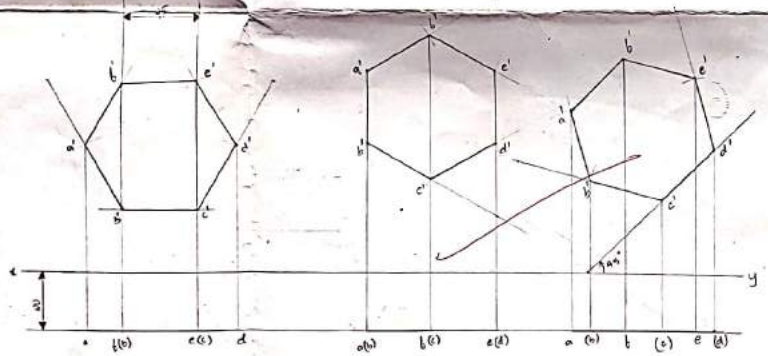


(1)



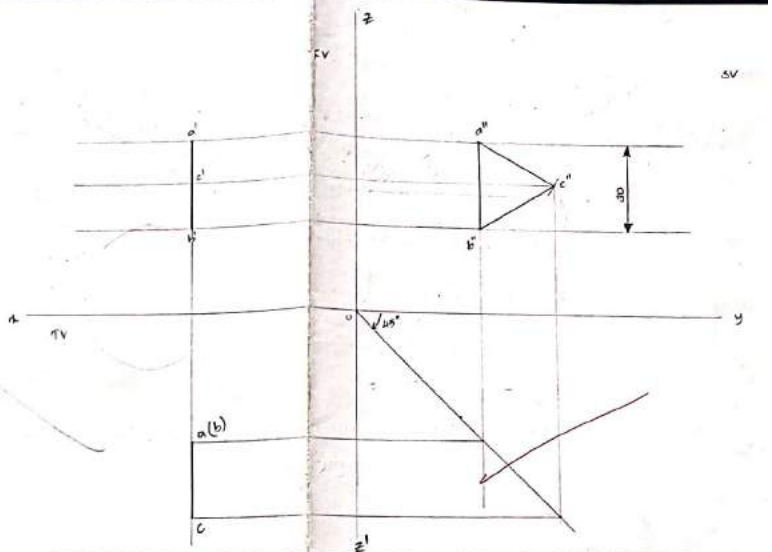
PLANE IS PARALLEL TO HP & PERPENDICULAR TO VP

(2)



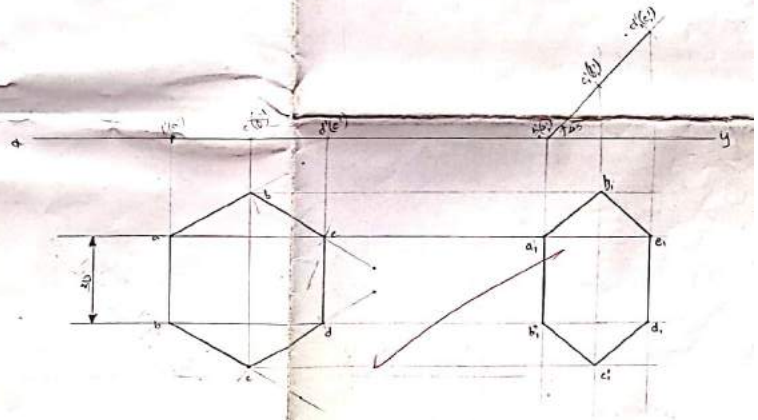
PLANE PARALLEL TO VP & PERPENDICULAR TO HP

(3)



PLANE IS PERPENDICULAR TO BOTH HP & VP.

(4)



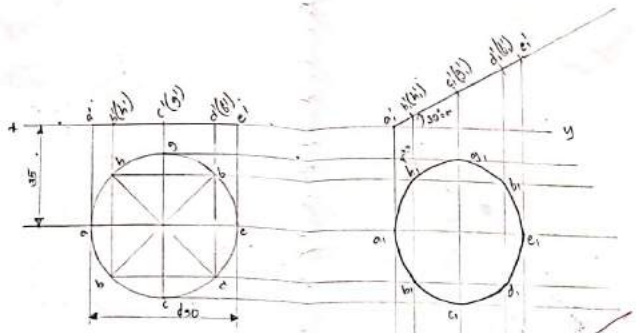
PLANE IS INCLINED TO HP & PERPENDICULAR TO VP
HEXAGON HAVING EDGE ON THE GROUND.

10/10

ALL DIMENSIONS ARE IN MM

MAHATMA GANDHI INSTITUTE OF TECHNOLOGY GANDIPET, HYDERABAD - 500 075		
TITLE: PROJECTION OF PLANES		
NAME: AMARNATH		
CLASS: ECE-02		SCALE: 1:1
ROLL No. 160116CW170	DATE: 08/11/2019	SHEET No: 13

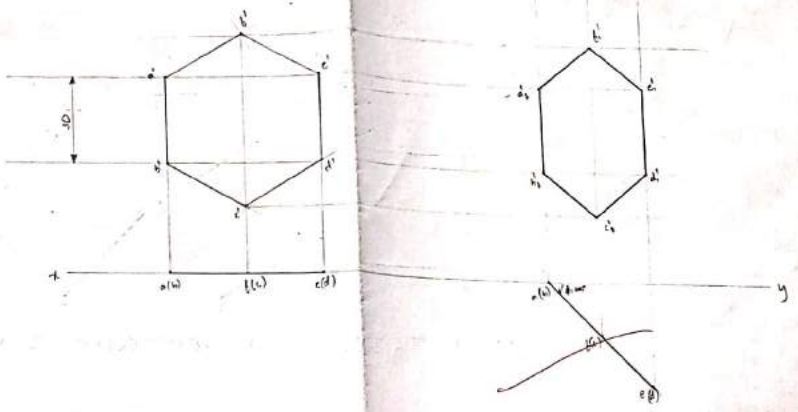
(5)



PLANE INCLINED TO HP & PERPENDICULAR TO VP

CIRCLE

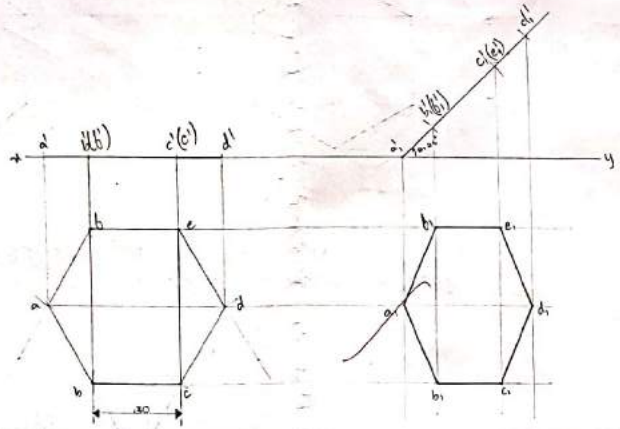
(7)



PLANE IS INCLINED TO VP AND PERPENDICULAR TO HP

HEXAGONAL PLANE HAS AN EDGE IN TH VP

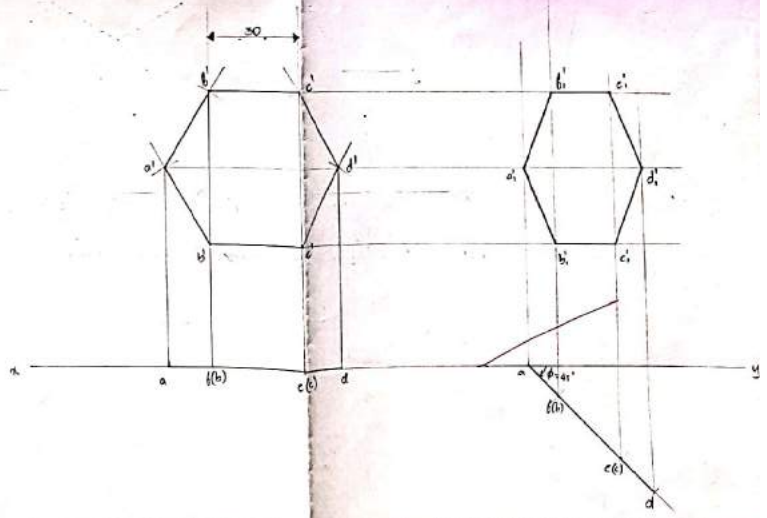
(6)



PLANE IS INCLINED TO HP & PERPENDICULAR TO VP

HEXAGON HAVING CORNER ON GROUND.

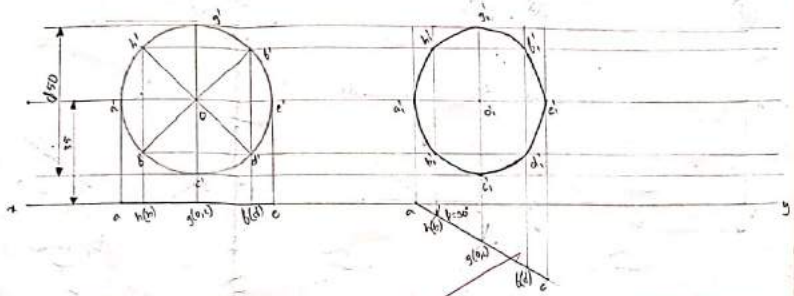
(8)



PLANE IS INCLINED TO VP AND PERPENDICULAR TO HP

HEXAGONAL PLANE HAS A CORNER IN THE VP.

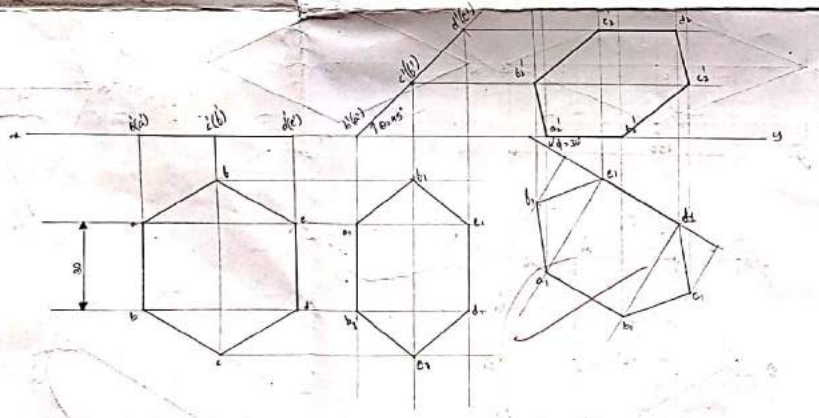
(9)



PLANE IS INCLINED TO VP & PERPENDICULAR TO HP.

CIRCLE

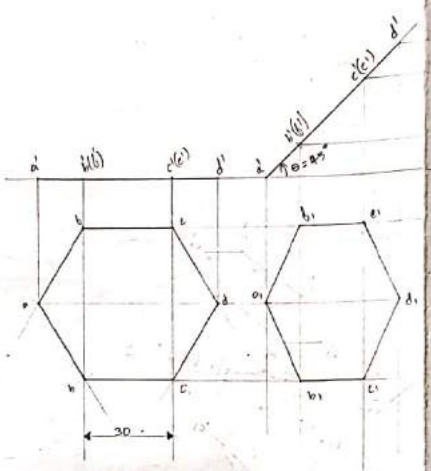
(10)

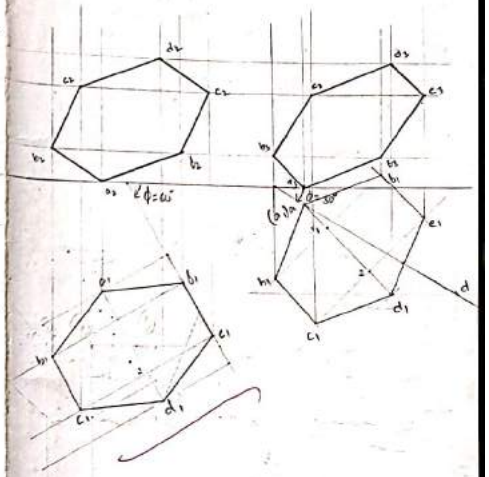


PLANE IS INCLINED TO BOTH THE PLANES (HP & VP)

HEXAGON

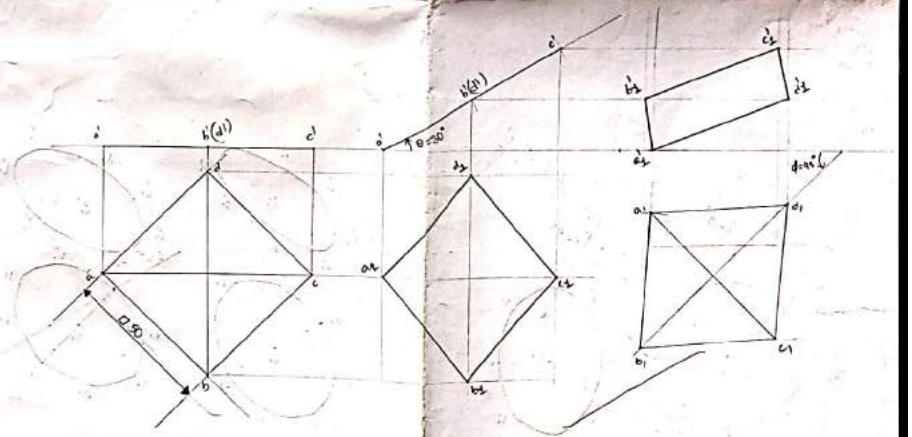
(11)





PLANE IS INCLINED TO BOTH THE PLAINS. (HP & VP)

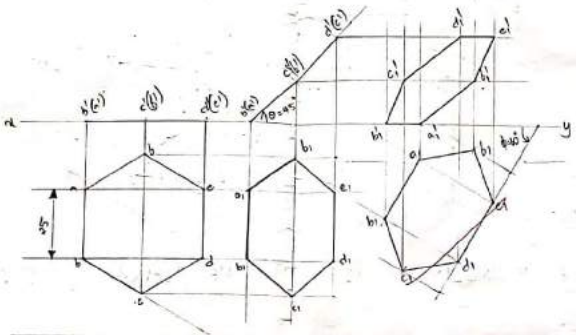
(12)



ALL DIMENSIONS ARE IN MM

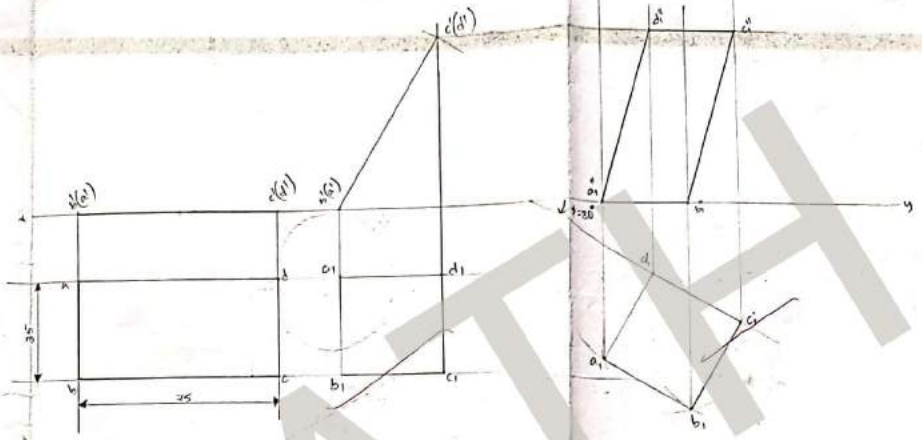
MAHATMA GANDHI INSTITUTE OF TECHNOLOGY GANDIPET, HYDERABAD - 500 075	
TITLE: PROJECTION OF PLANES	
NAME: G. AMARNATH	
CLASS: ECE-02	SCALE: 1:1
ROLL No. 19261A0470	DATE: 06/11/2019
	SHEET No: 14

(13) 12-8

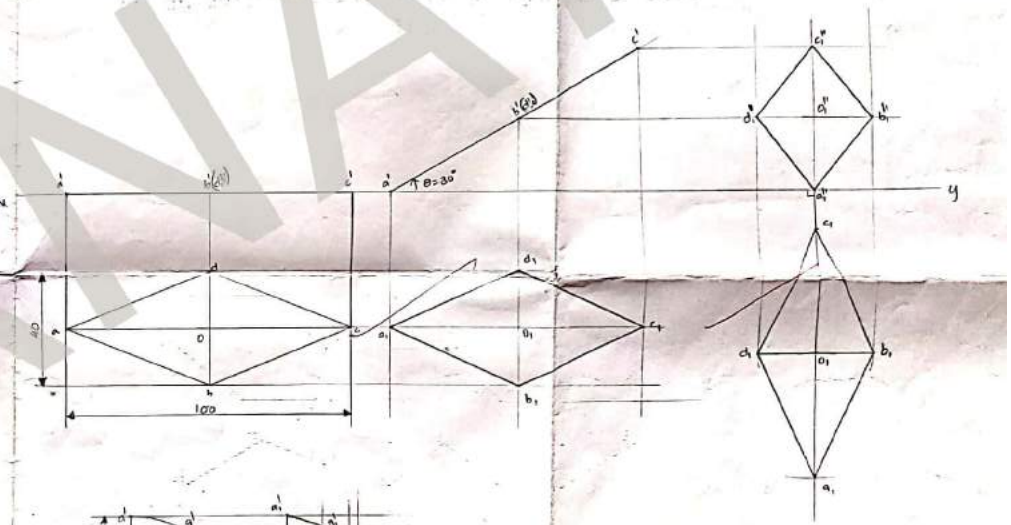


PLANE IS INCLINED TO BOTH THE PLANES

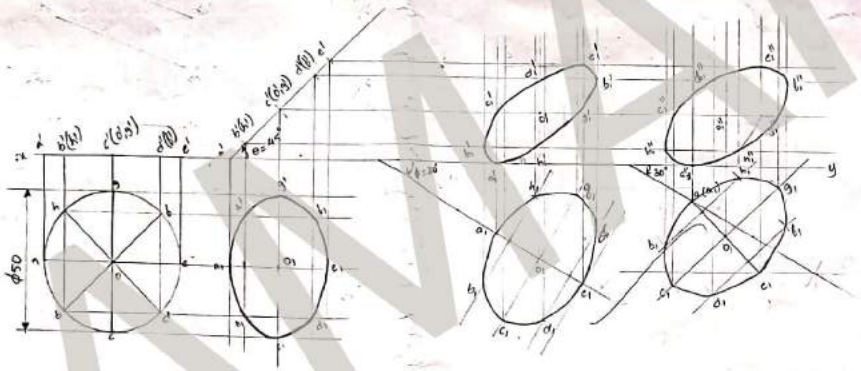
(15)



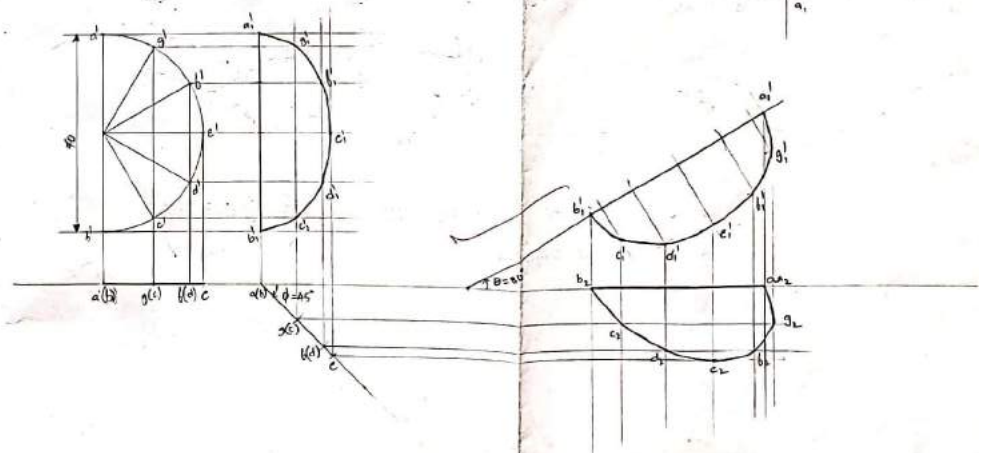
(16)



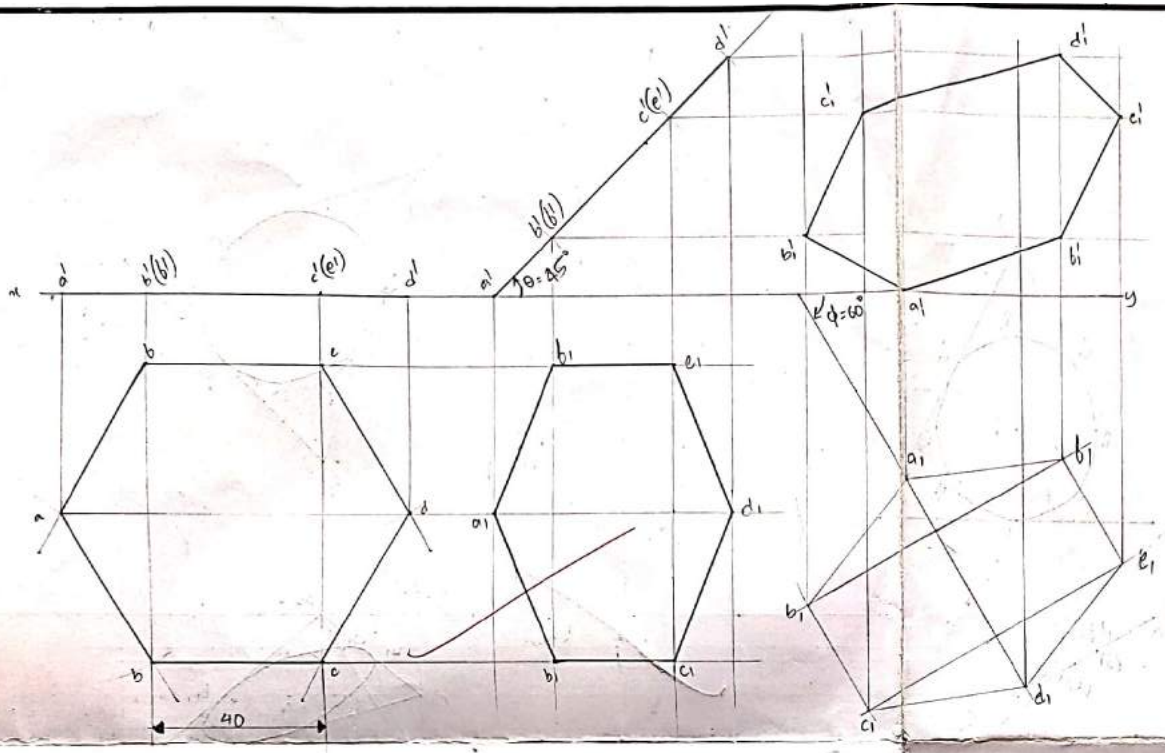
(14) 12-9



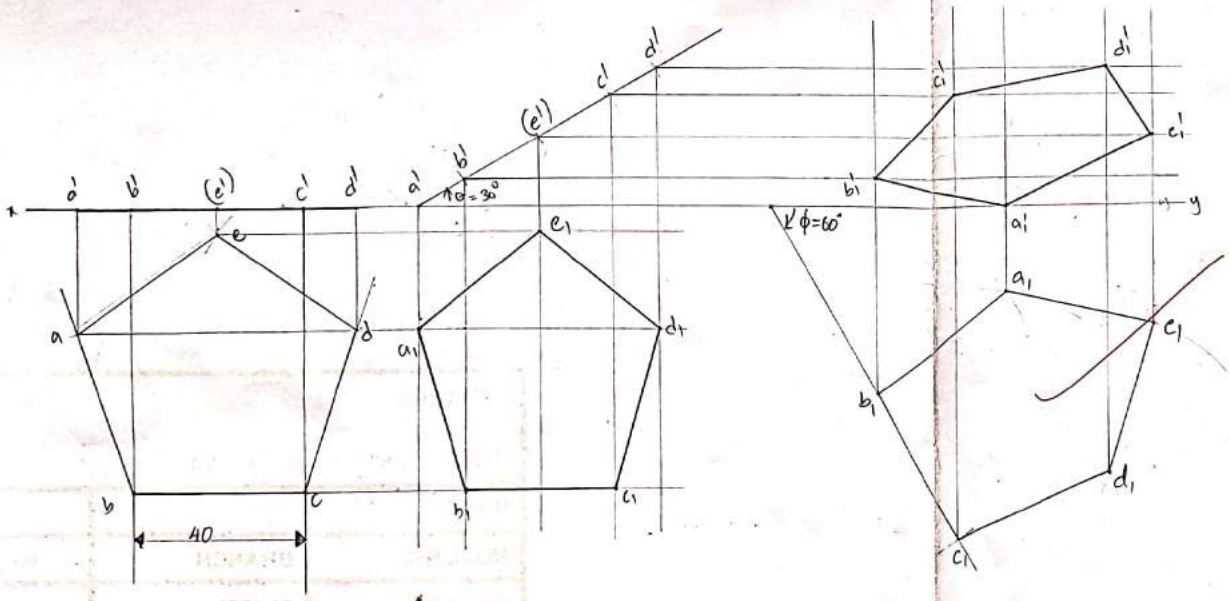
(17)



(18) (2)



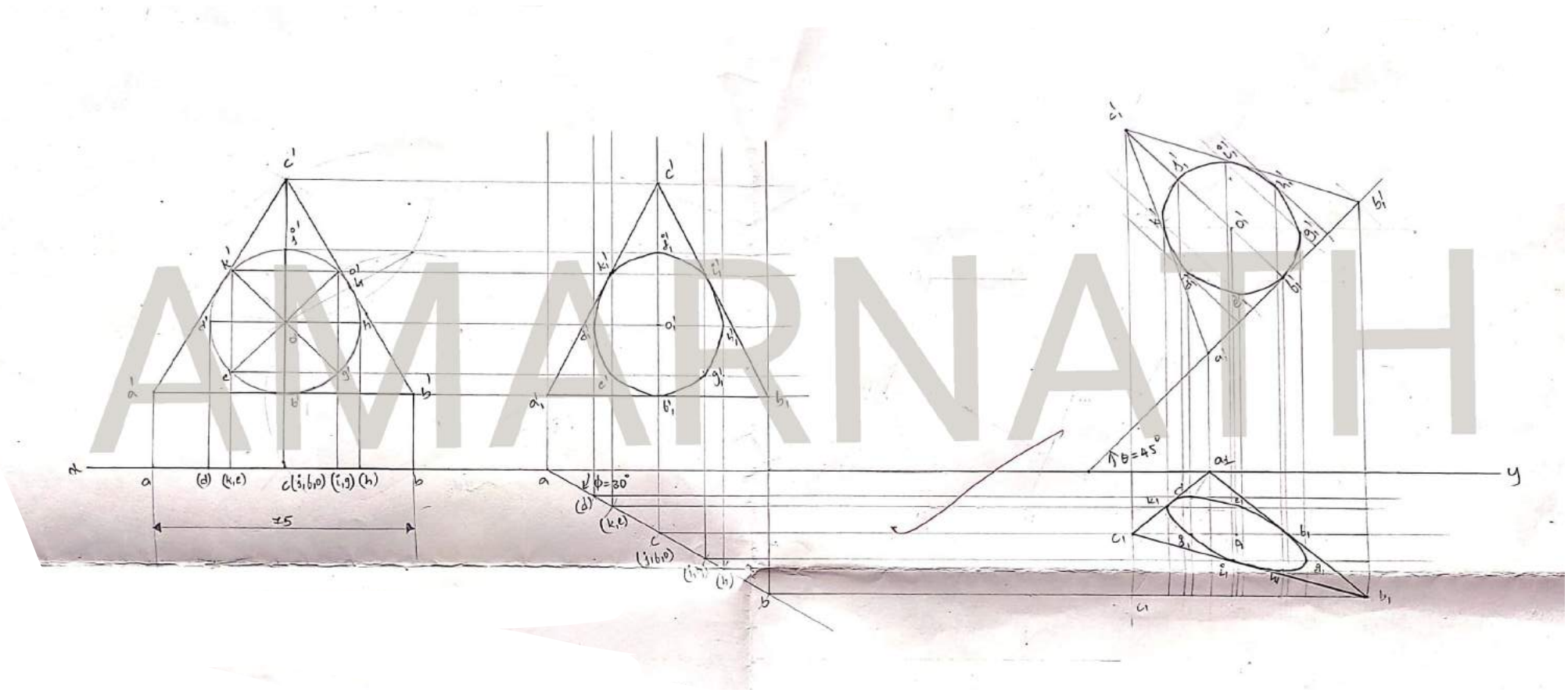
(19) (3)



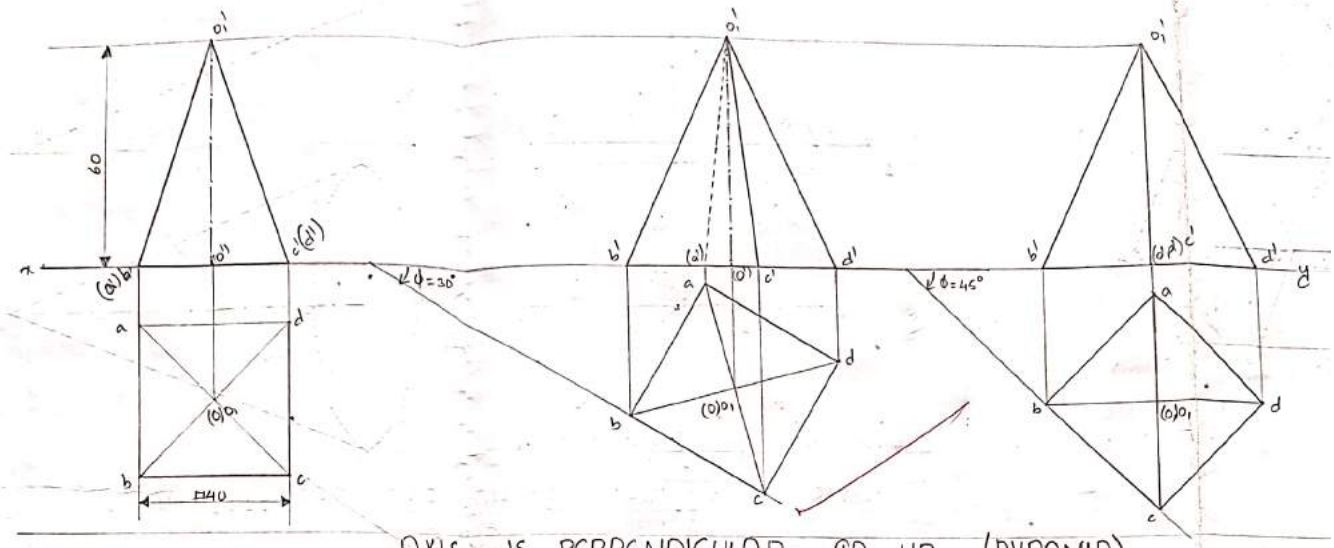
ALL DIMENSIONS ARE IN MM

COLLEGE : MGIT		
TITLE : PROJECTION OF PLANES		
NAME : G.	AMARNATH	
ROLL NO. 19261A0430	BRANCH	ECE-02
SECTION 02	PLATE	15

(20)

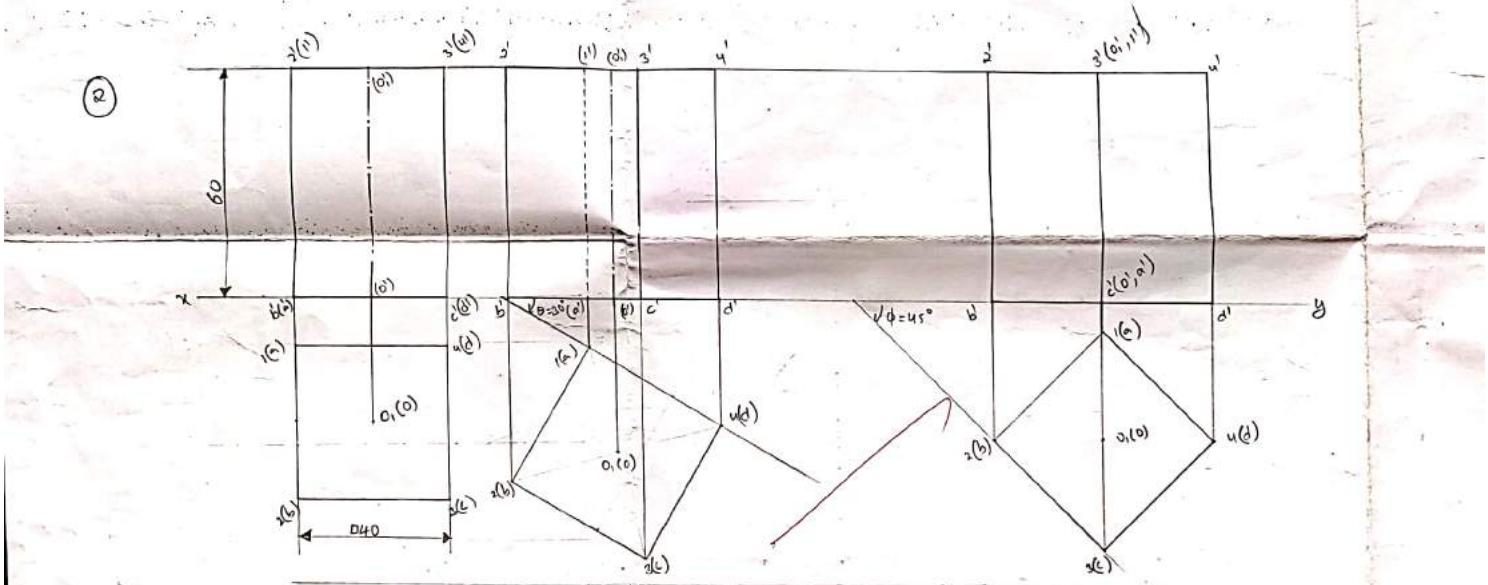


(1)



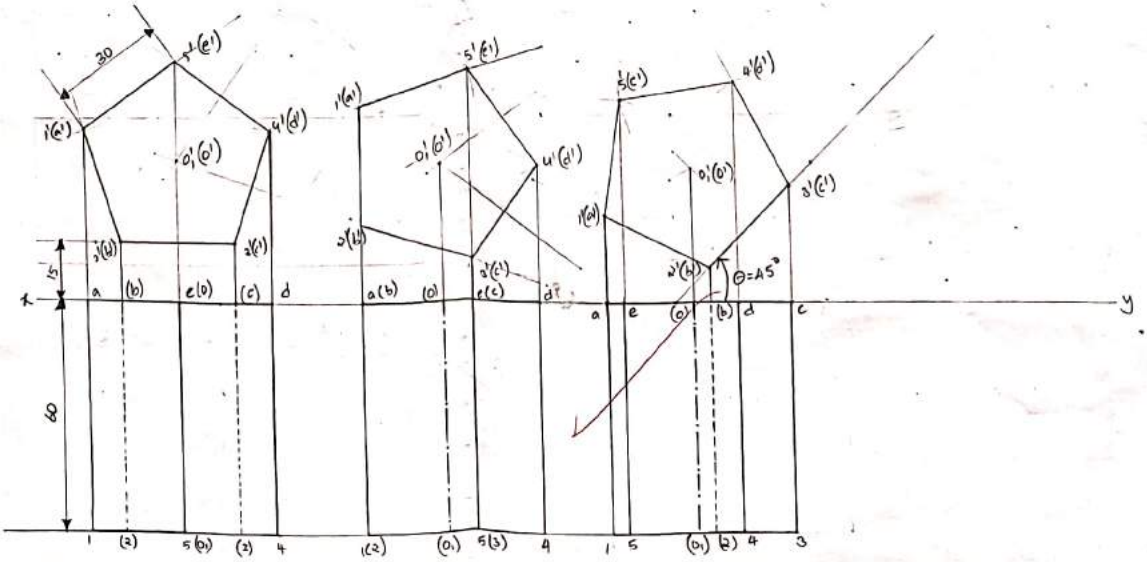
AXIS IS PERPENDICULAR TO HP (PYRAMID)

(2)



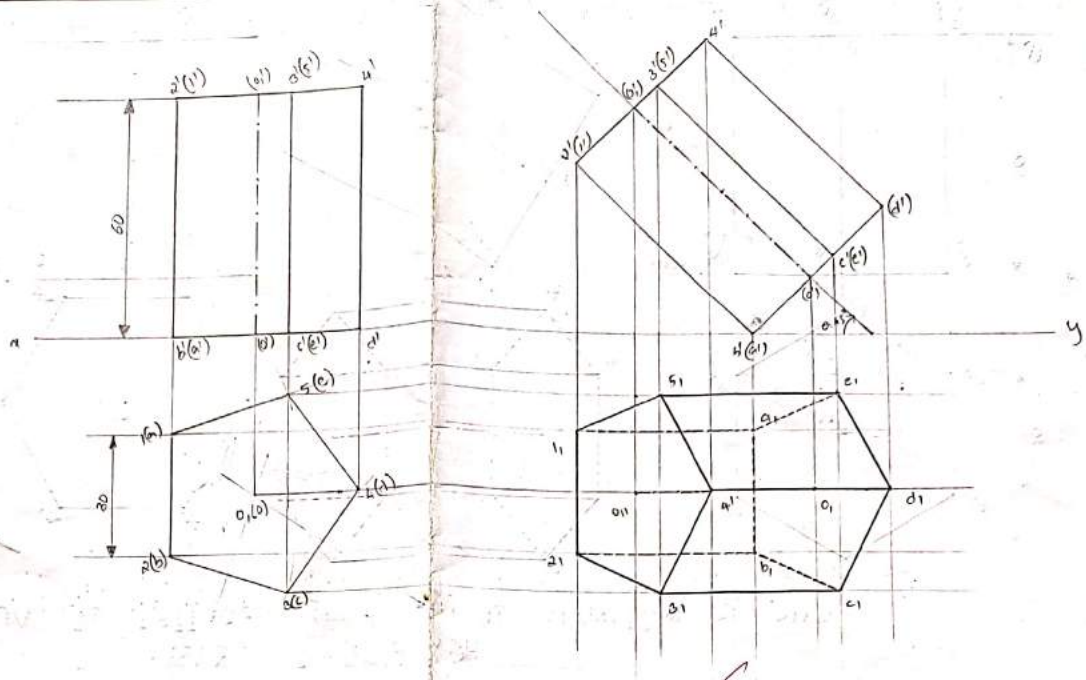
AXIS IS PERPENDICULAR TO HP (PRISM)

(3)



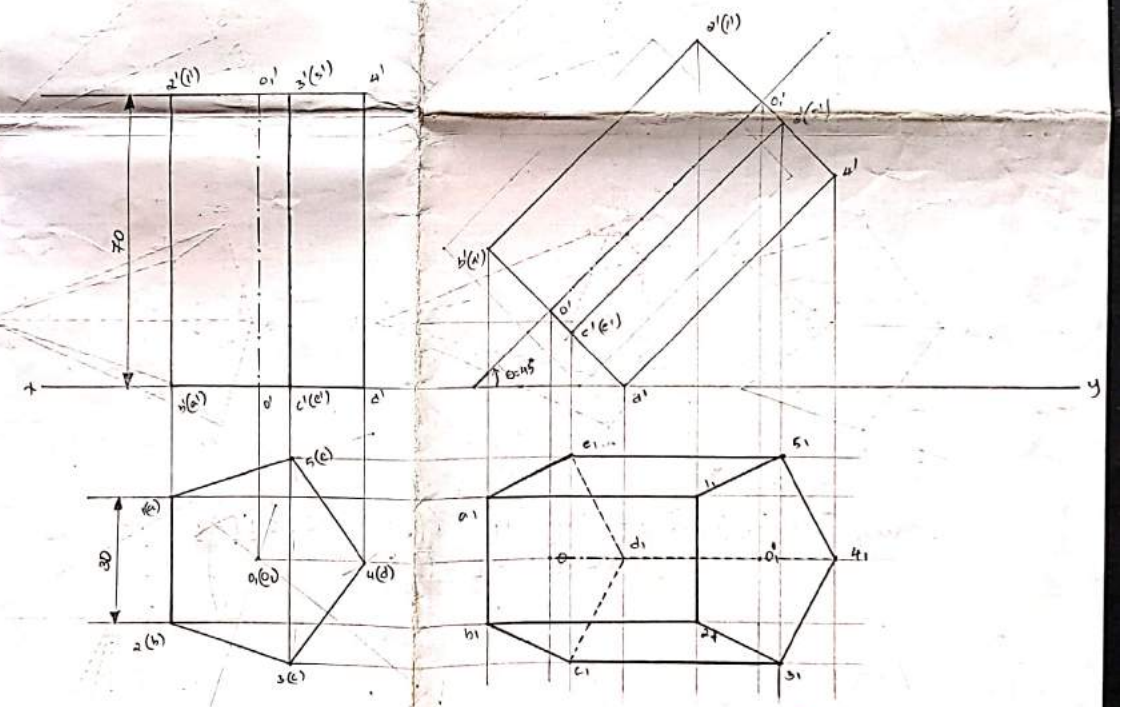
AXIS IS PERPENDICULAR TO VP.

(4)



AXIS IS INCLINED TO HP AND PARALLEL TO VP.
EDGE OF ITS BASE IN HP

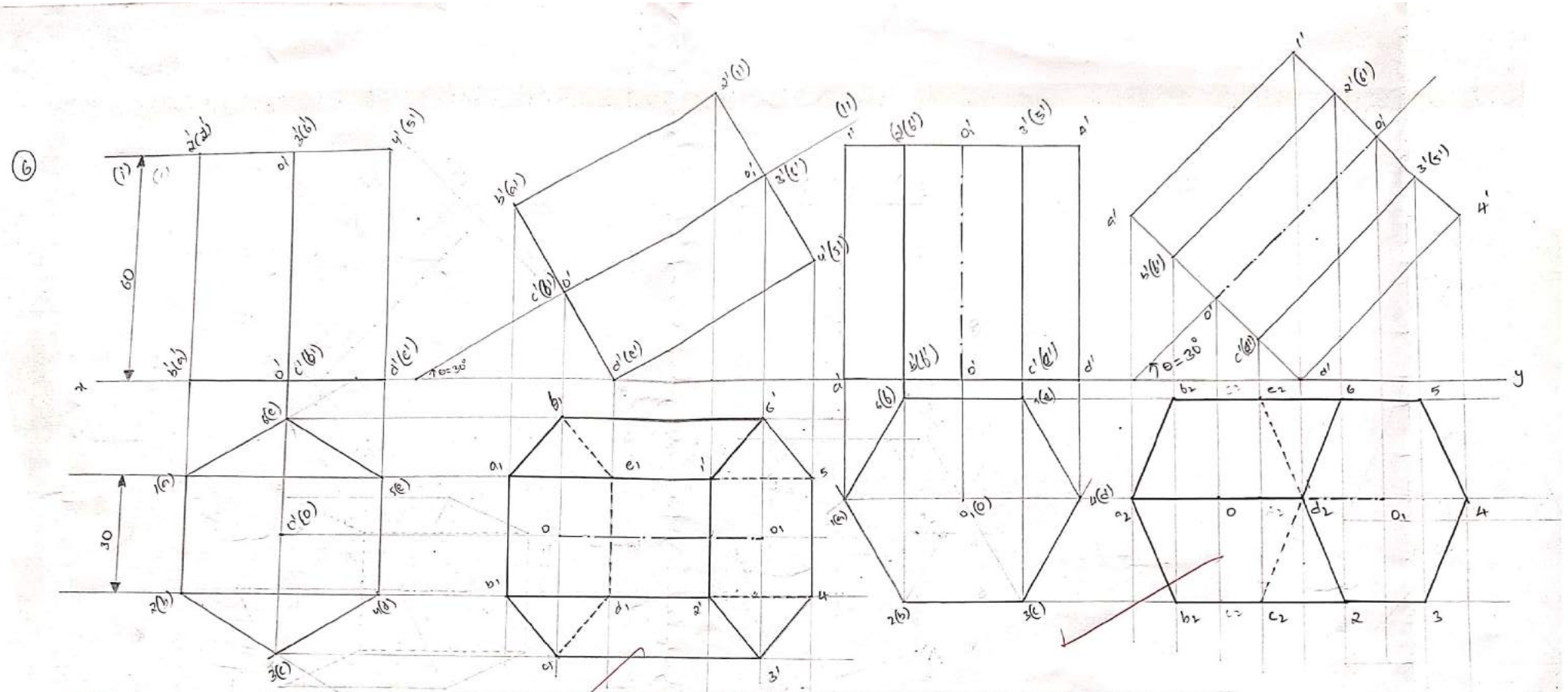
(5)



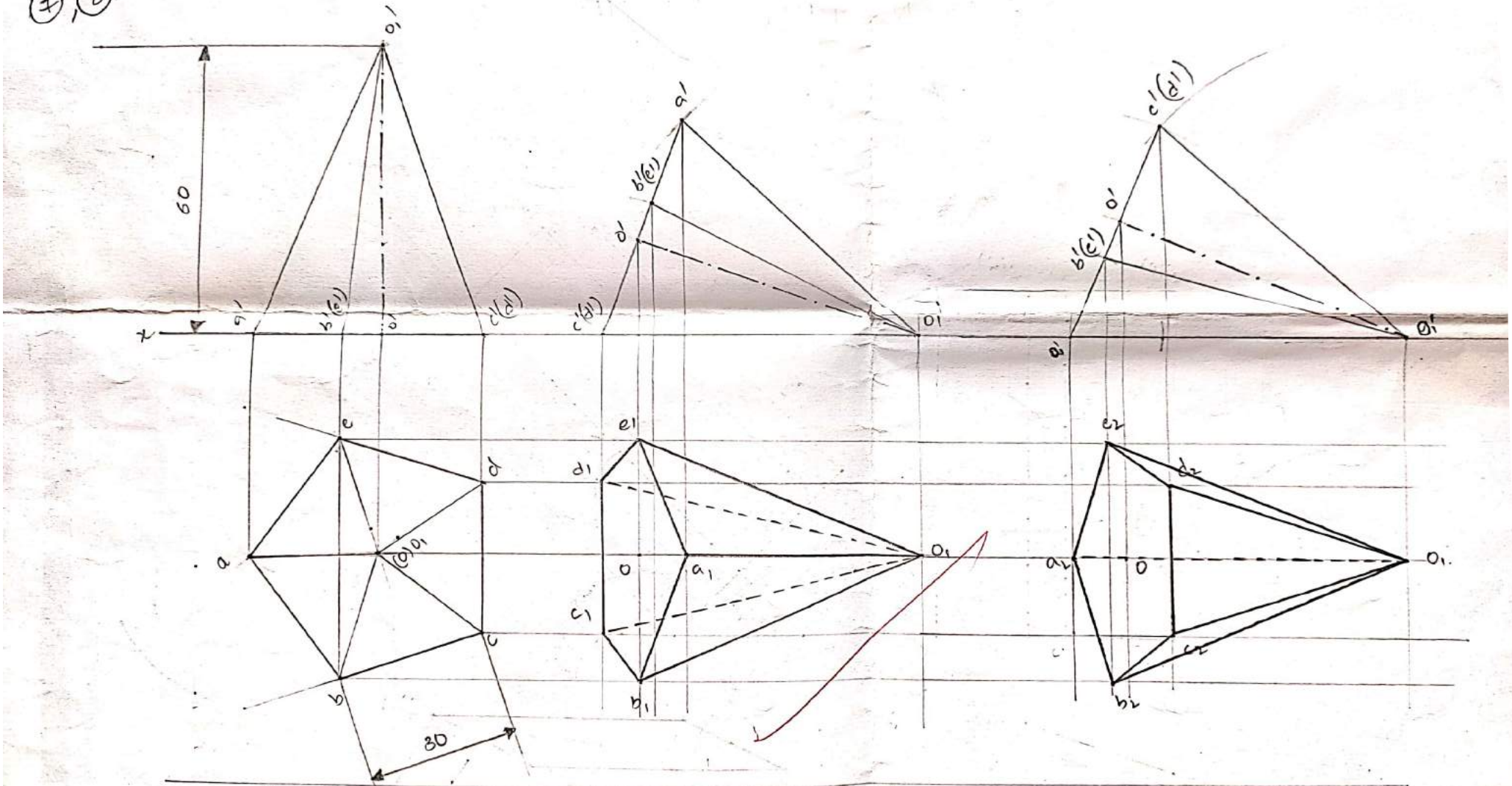
AXIS IS INCLINED TO HP AND PARALLEL TO VP
CORNER IN THE HP

ALL DIMENSIONS ARE IN MM

MAHATMA GANDHI INSTITUTE OF TECHNOLOGY **GANDIPET, HYDERABAD - 500 075**		
TITLE : PROJECTIONS OF SOLIDS		
NAME : G. AMARNATH		
CLASS : ECE - 02		SCALE : 1:1
ROLL No. 1926IA0470	DATE : 27/11/19	SHEET No : 16


(6)
60
30
θ=30°
θ=30°
x
y
AXIS IS INCLINED TO HP AND PARALLEL TO VP
HEXAGONAL PRISM

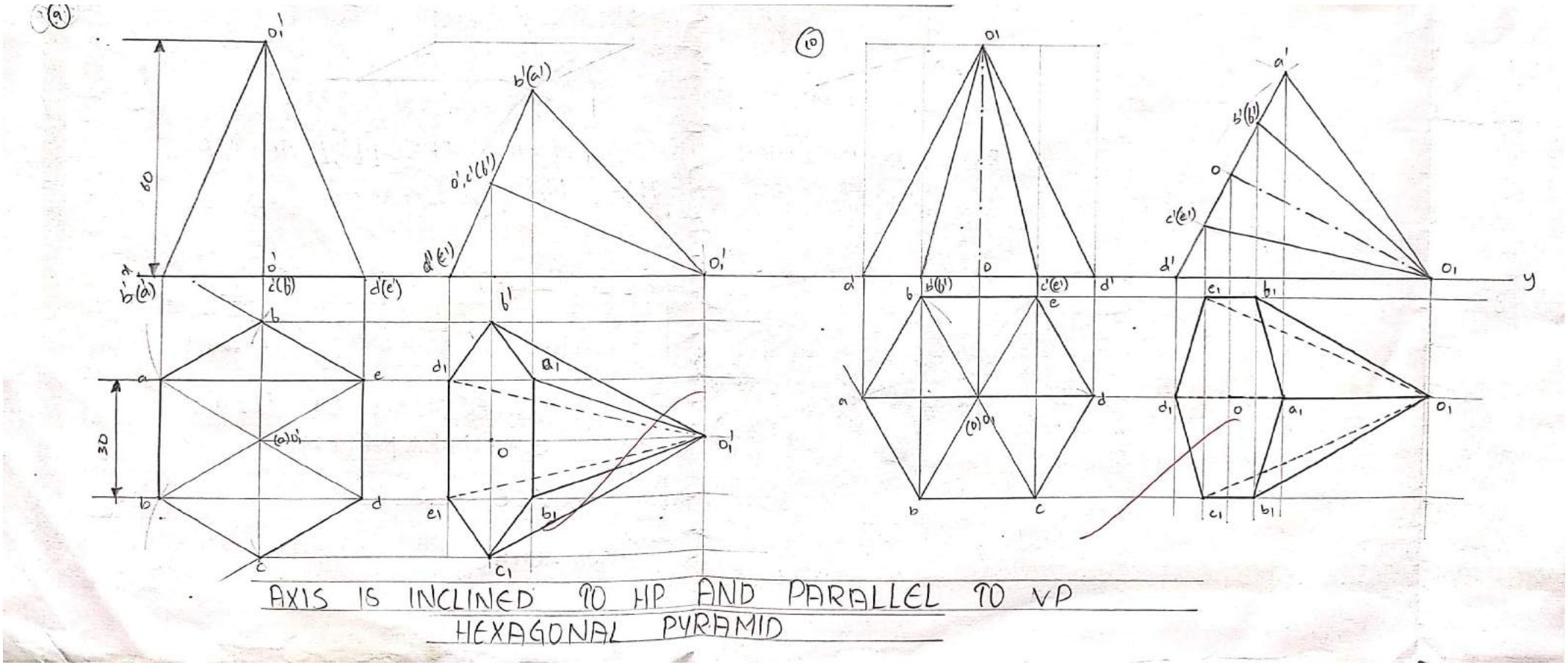
(7), (8)



AXIS IS INCLINED TO HP AND PARALLEL TO VP

PENTAGONAL PYRAMID

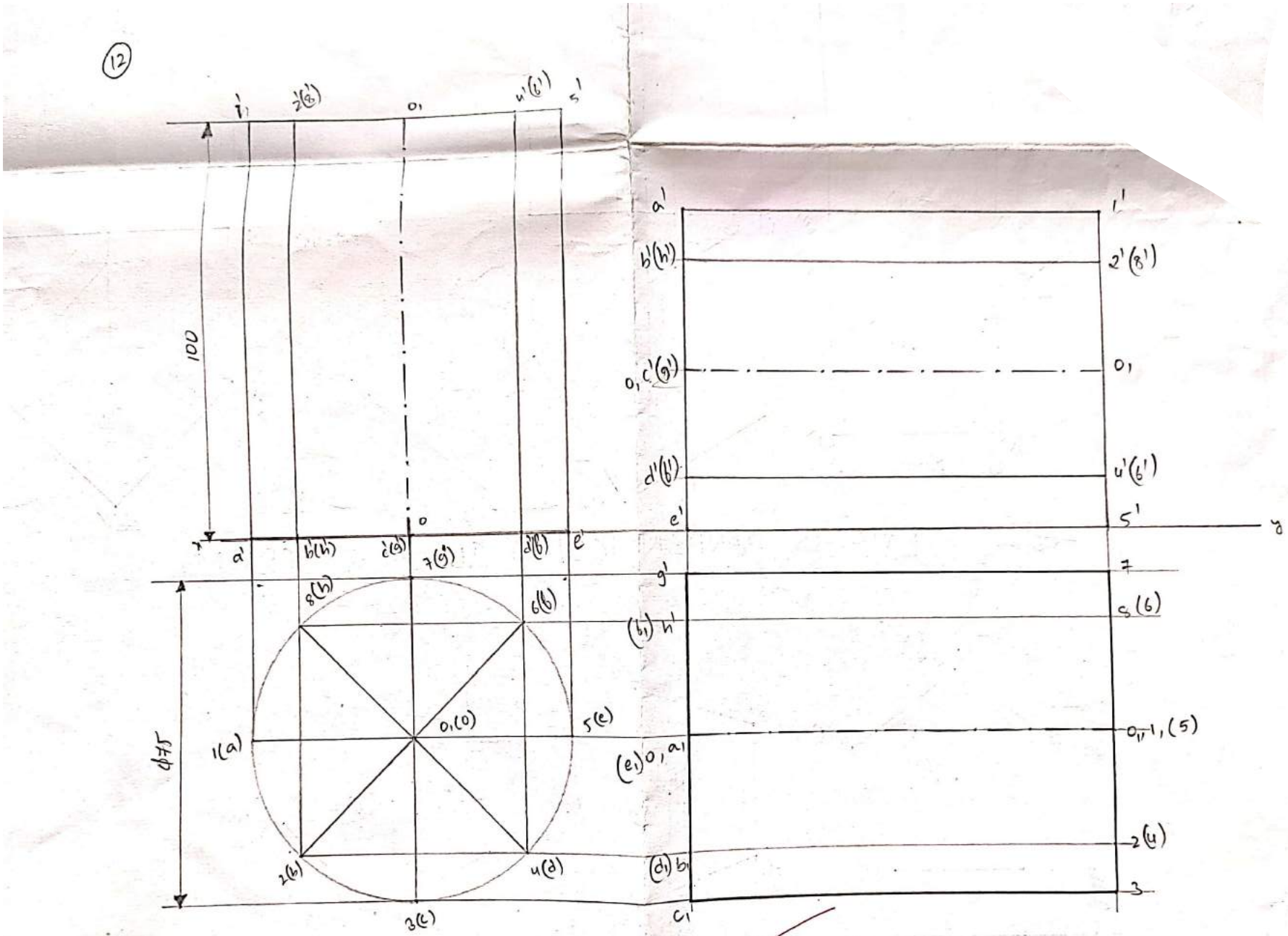
(9)


(a)
(b)
60
30
x
y
AXIS IS INCLINED TO HP AND PARALLEL TO VP
HEXAGONAL PYRAMID

AXIS IS INCLINED TO HP AND PARALLEL TO VP

CONE

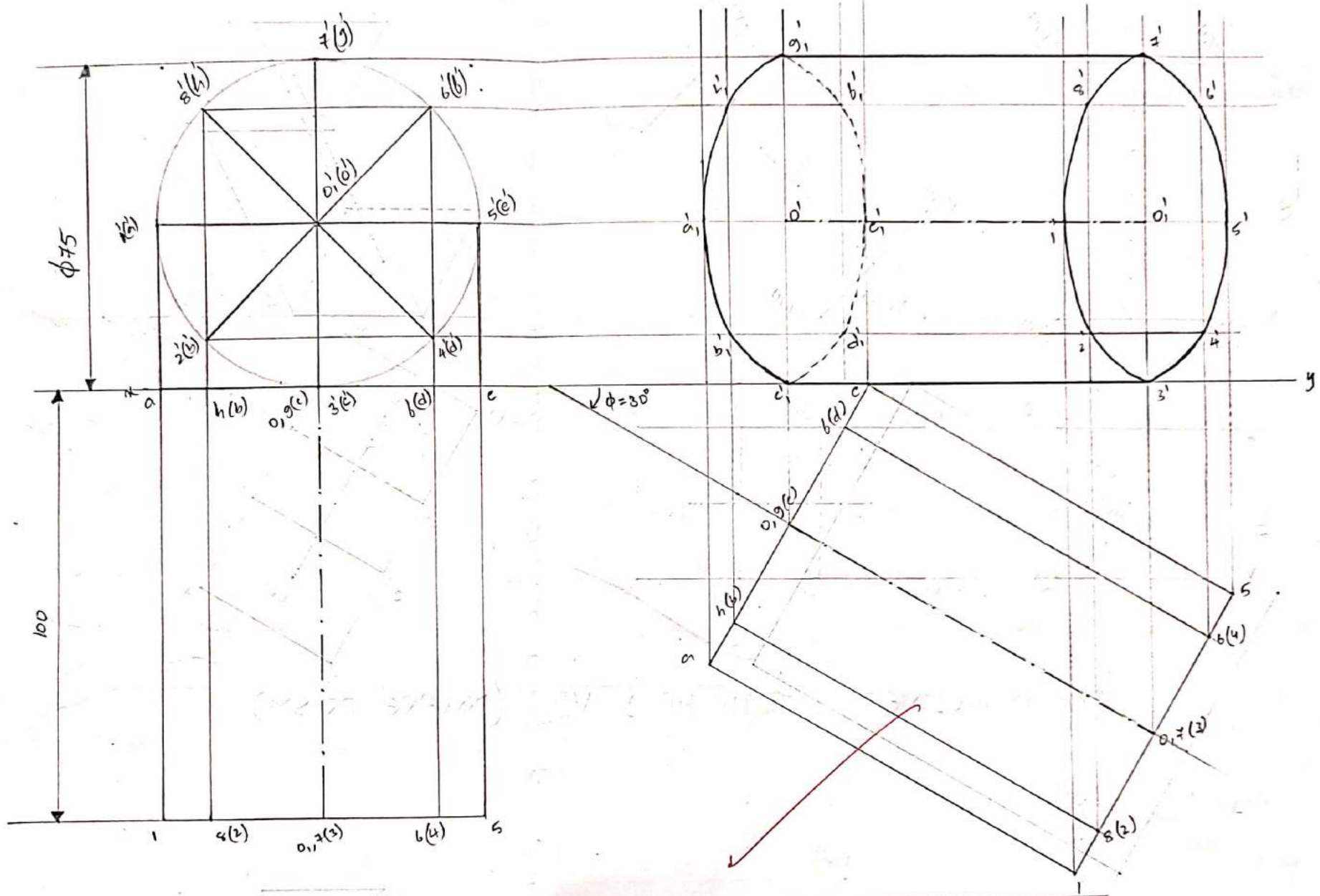
(12)



AXIS IS INCLINED TO HP AND PARALLEL TO VP

CYLINDER

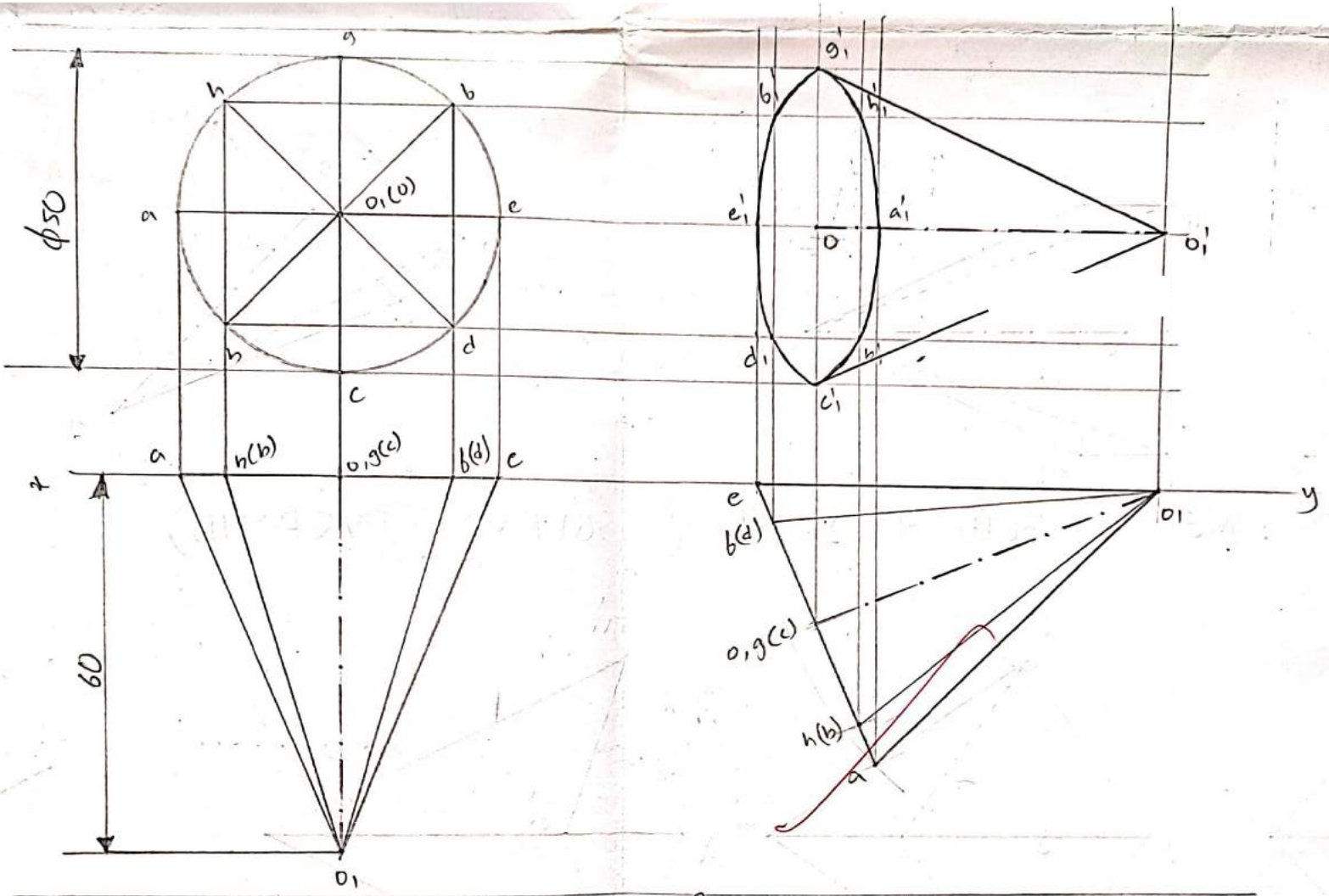
(13)



AXIS IS INCLINED TO VP & PARALLEL TO HP

CYLINDER

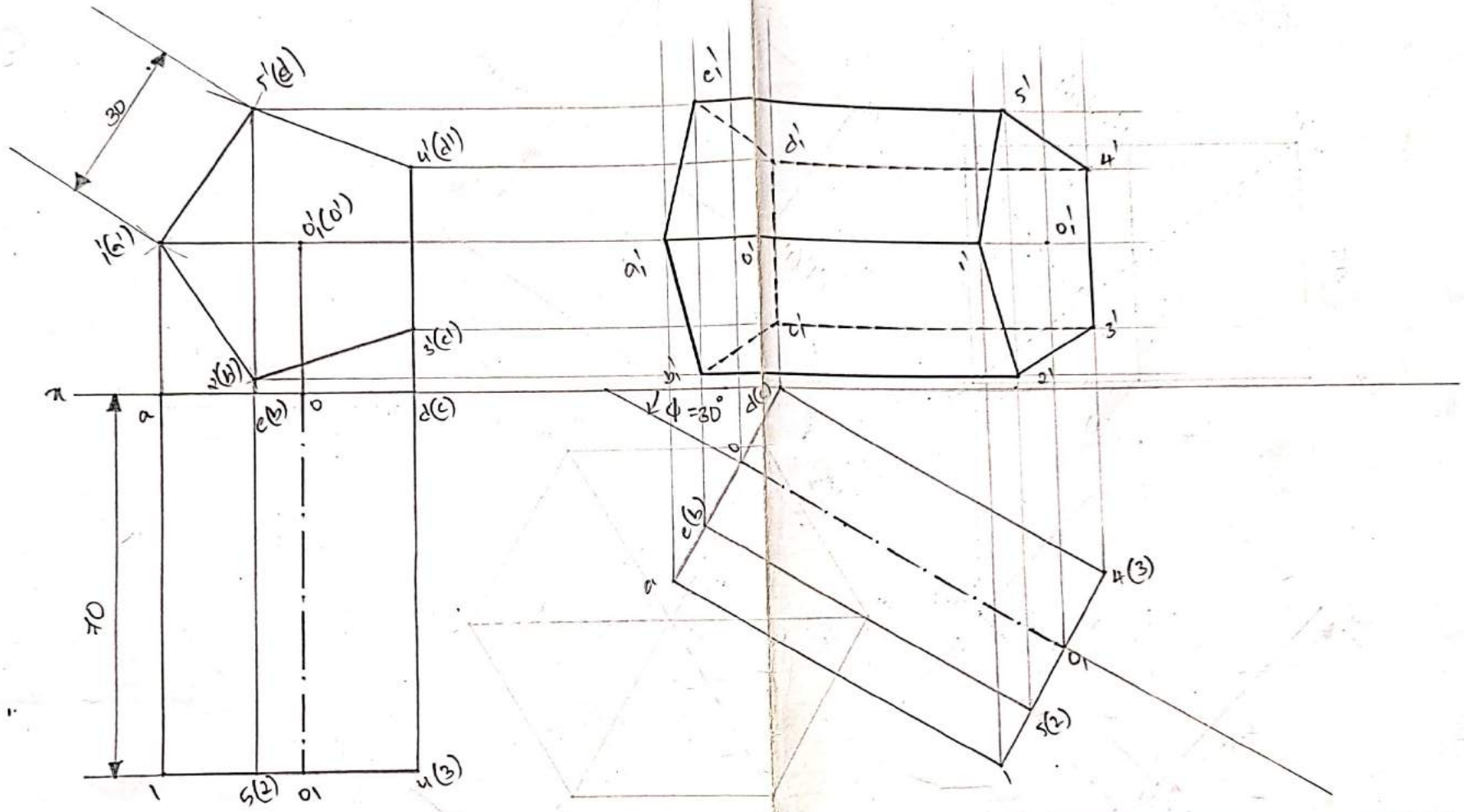
(14)



AXIS IS INCLINED TO VP & PARALLEL TO HP

CONE.

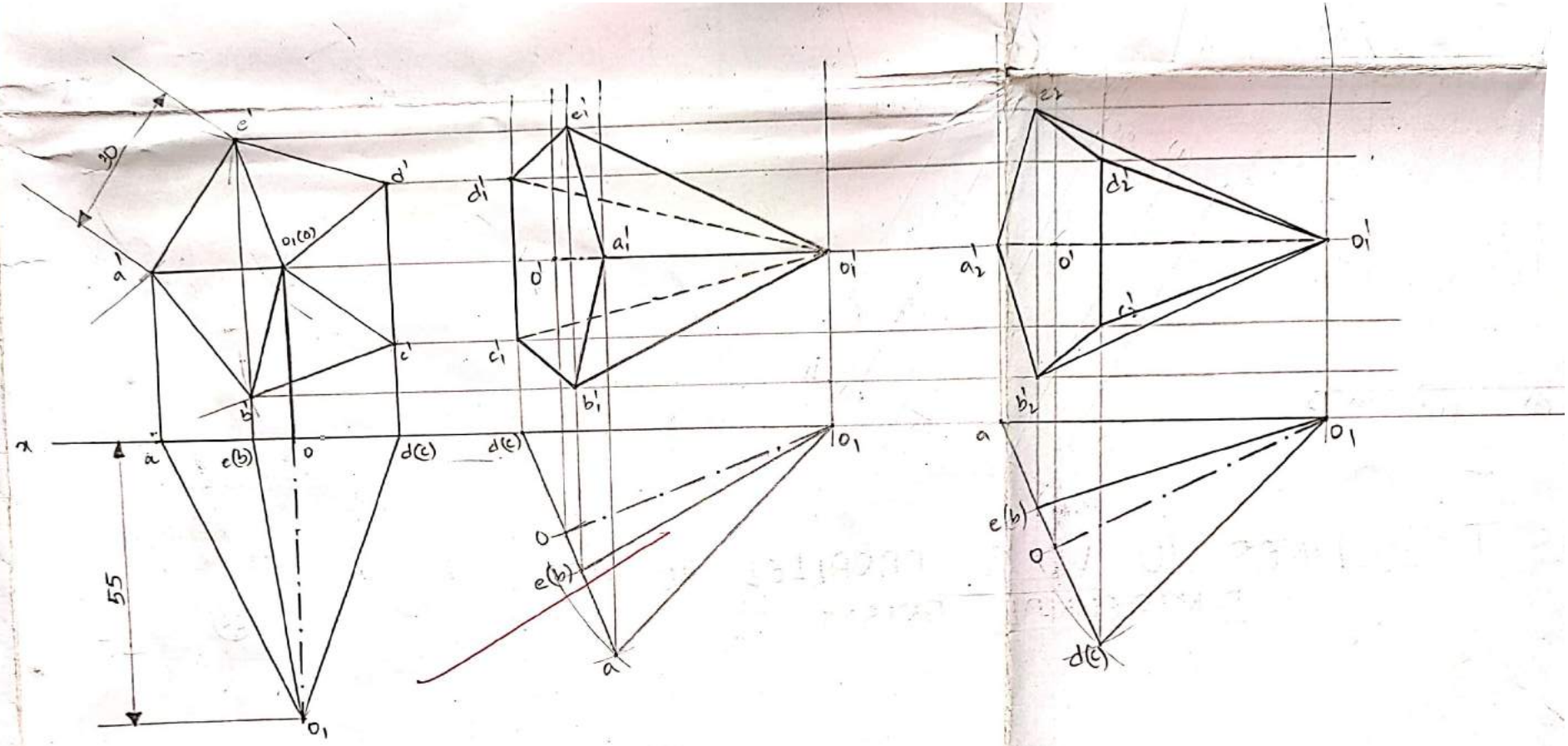
(17)



AXIS IS INCLINED TO VP & PARALLEL TO HP

PENTAGONAL PRISM

(15), (16)

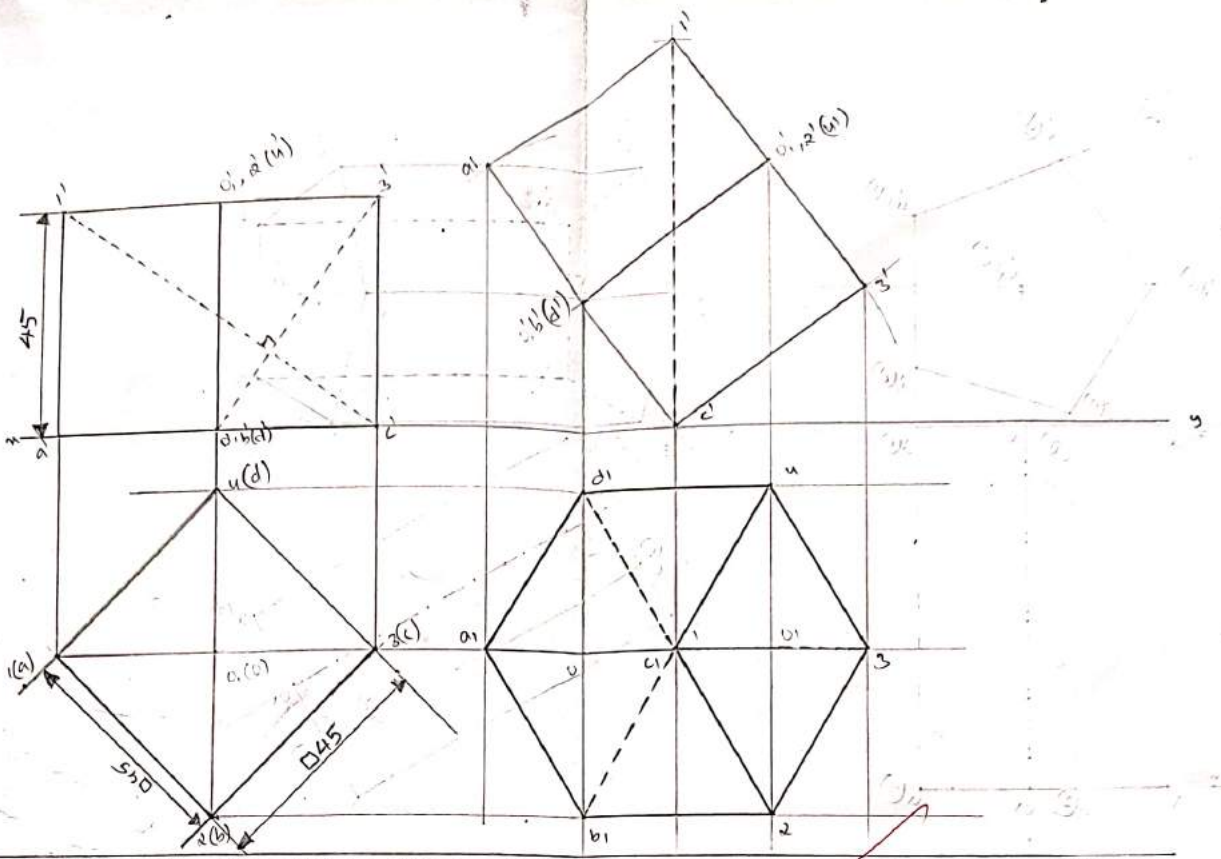


AXIS IS INCLINED TO VP & PARALLEL TO HP

PENTAGONAL PYRAMID.

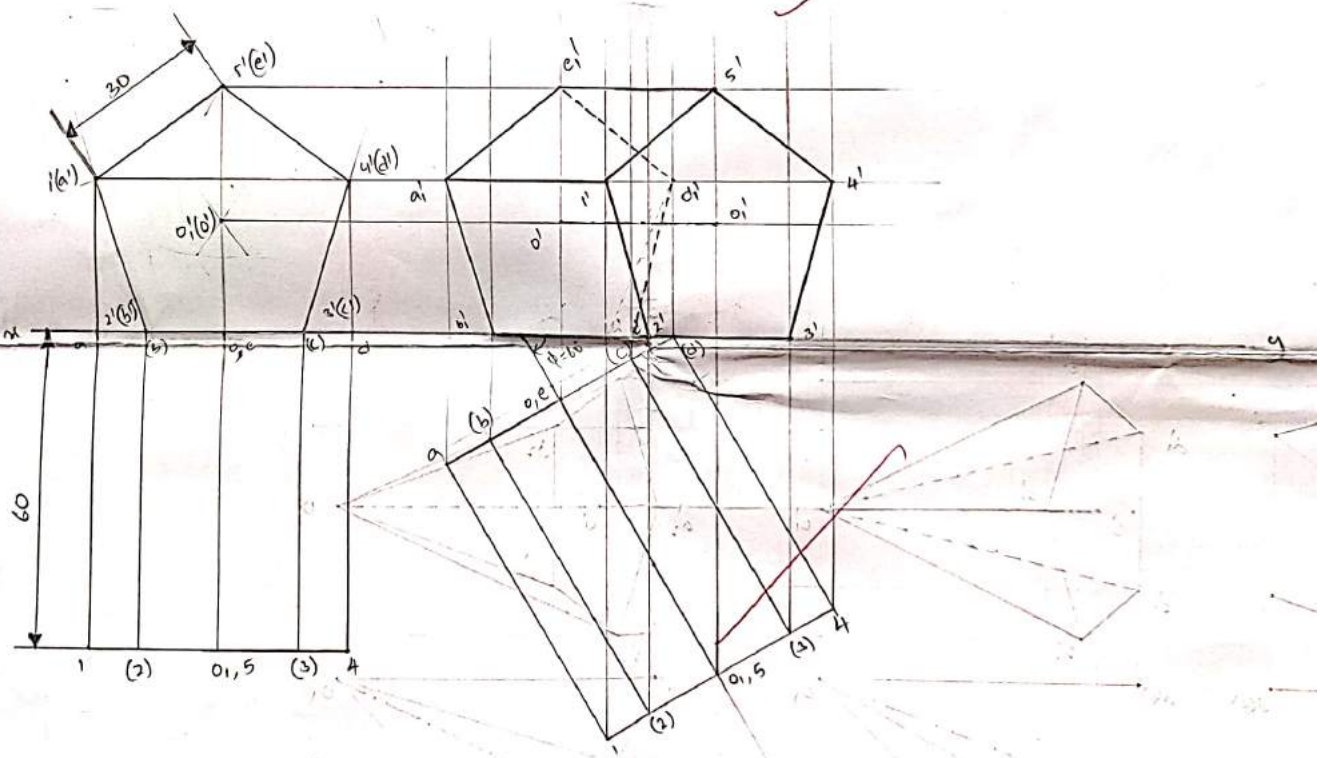
10/10

(18)



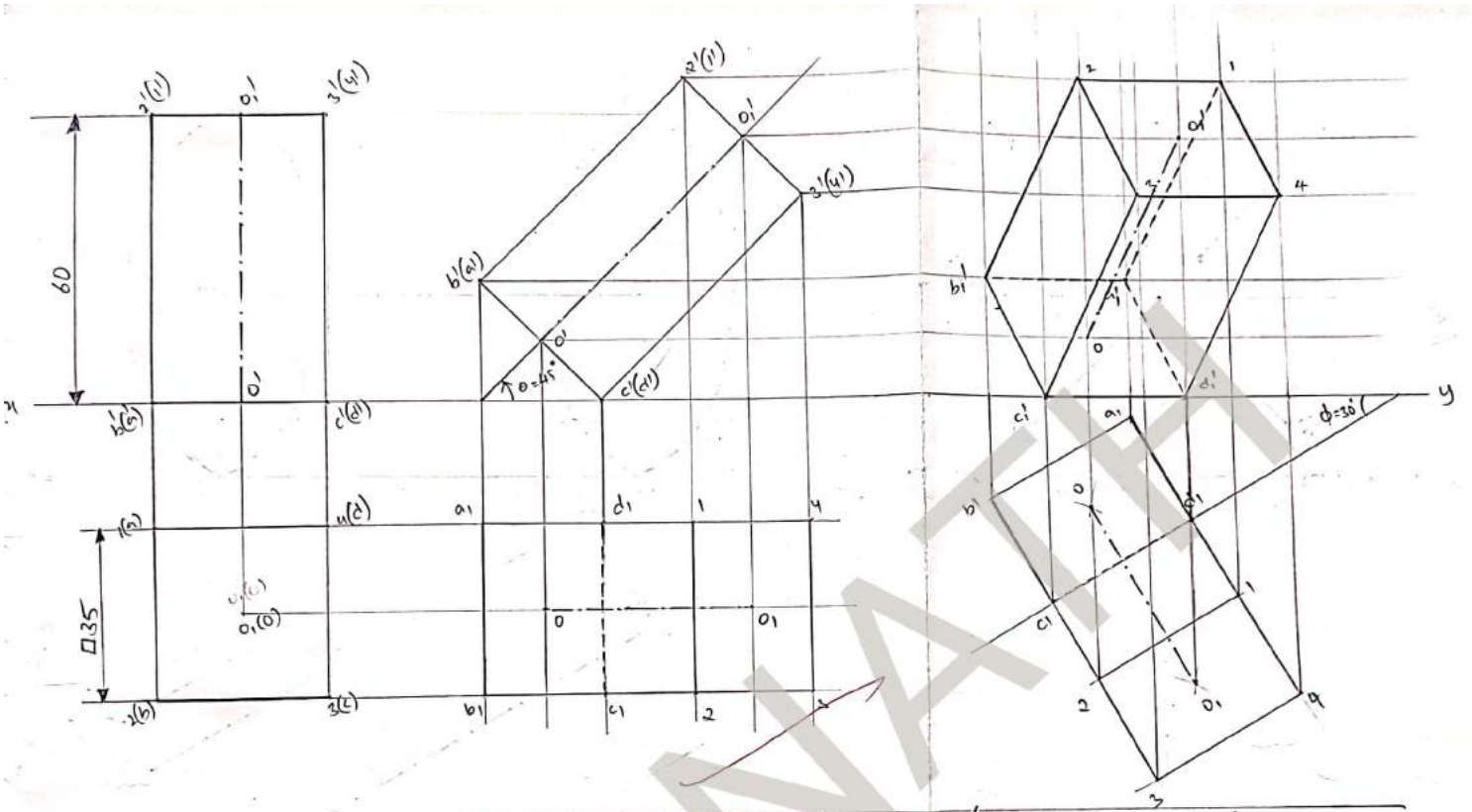
SQUARE PRISM WITH SOLID DIAGONAL VERTICAL TO

(19)

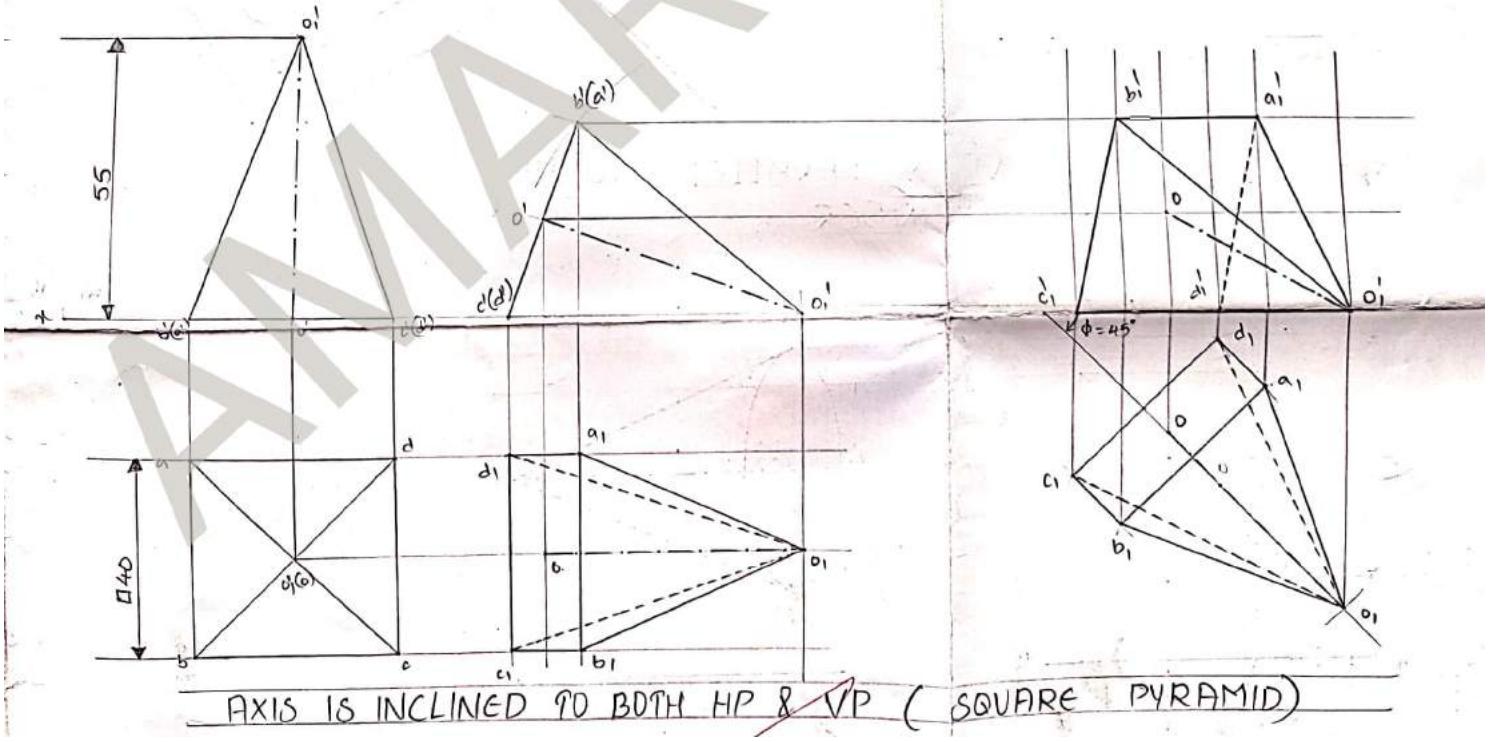


AXIS IS INCLINED TO VP & PARALLEL TO HP

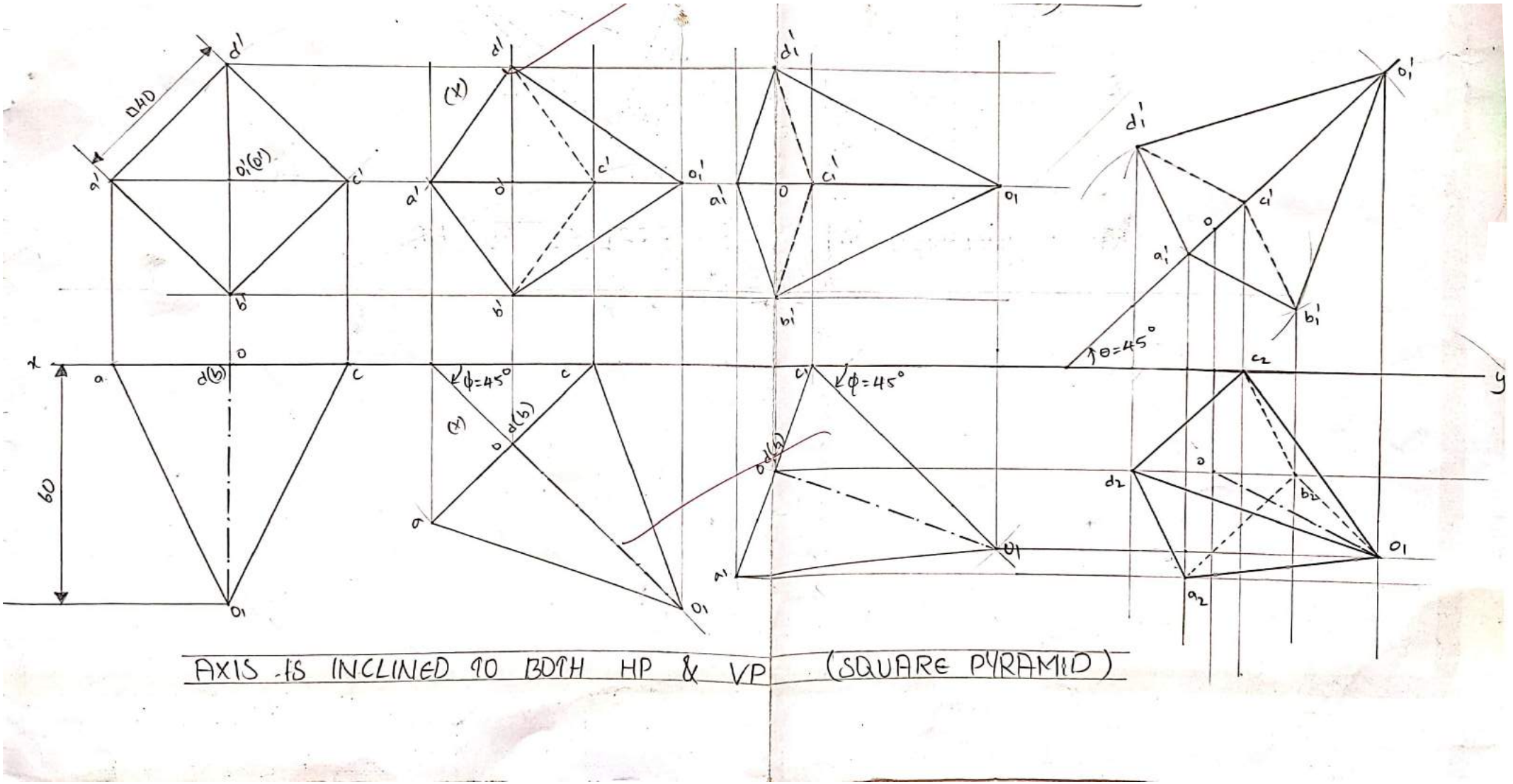
PENTAGONAL PRISM



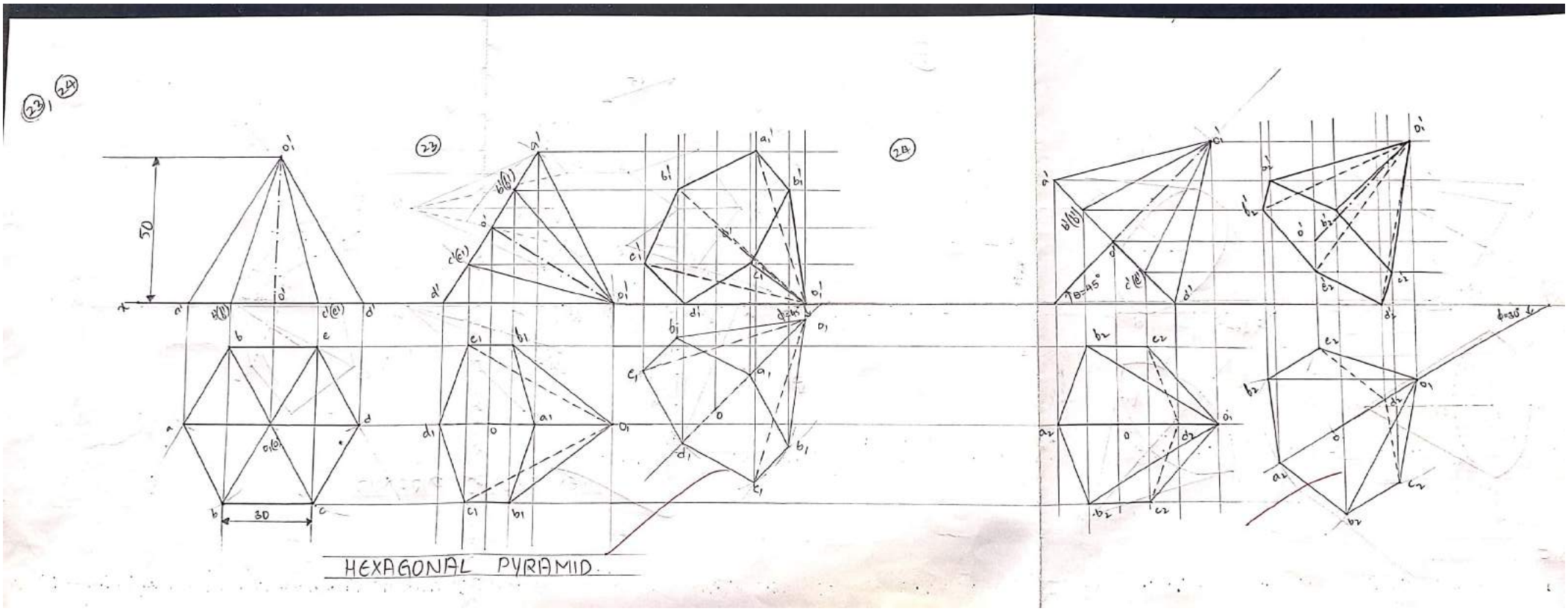
AXIS IS INCLINED TO BOTH HP & VP (SQUARE PRISM)



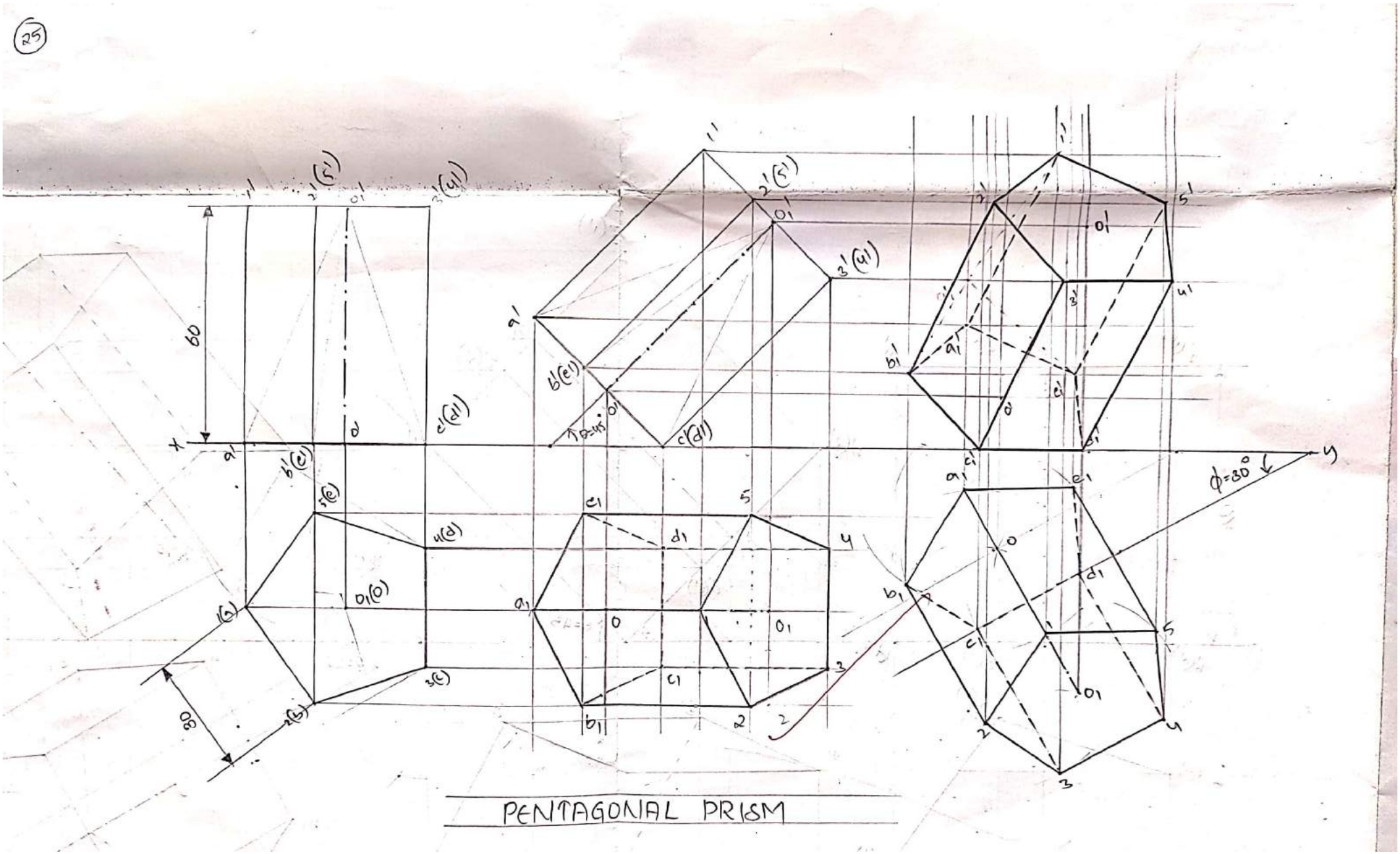
AXIS IS INCLINED TO BOTH HP & VP (SQUARE PYRAMID)



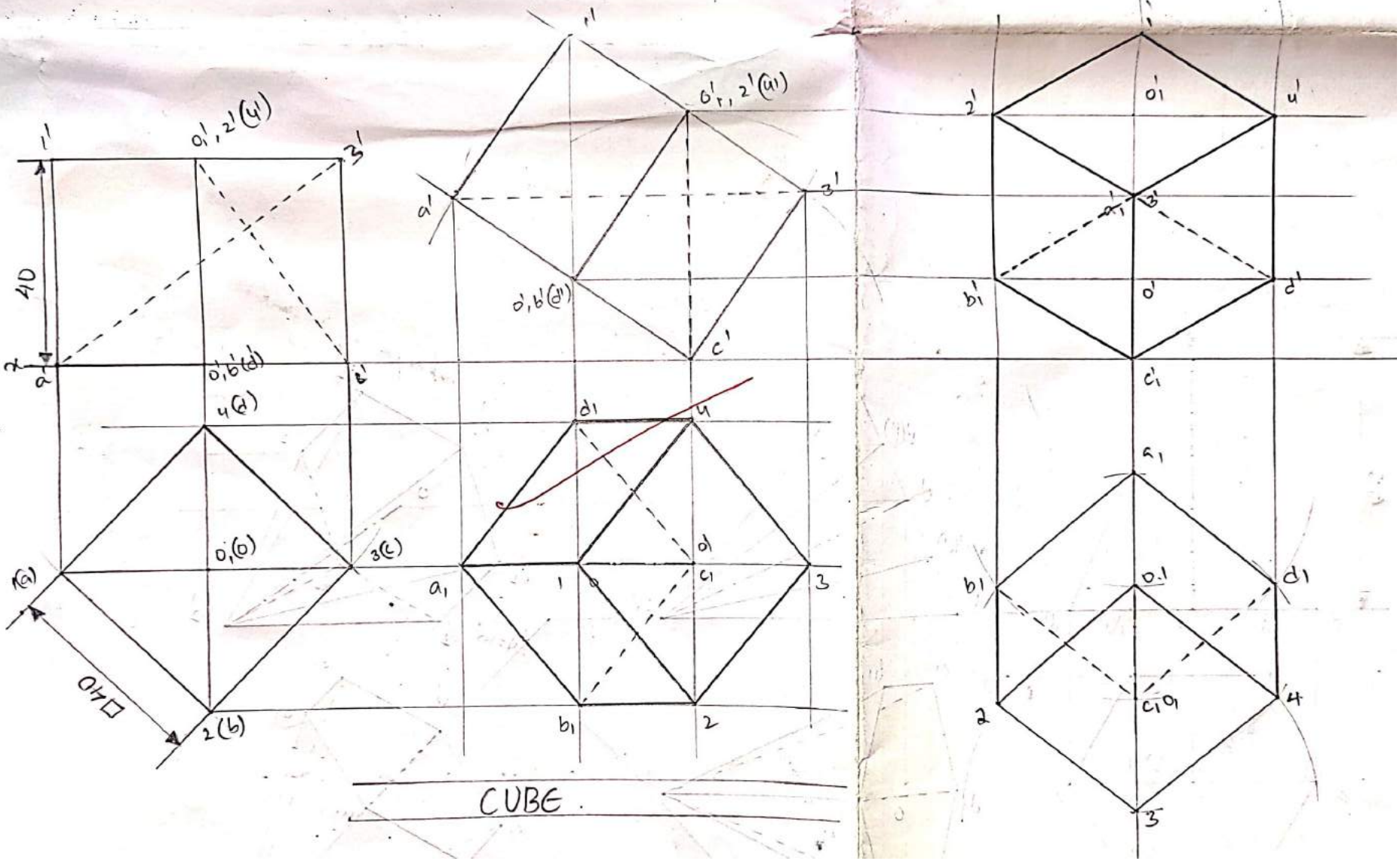
AXIS IS INCLINED TO BOTH HP & VP (SQUARE PYRAMID)

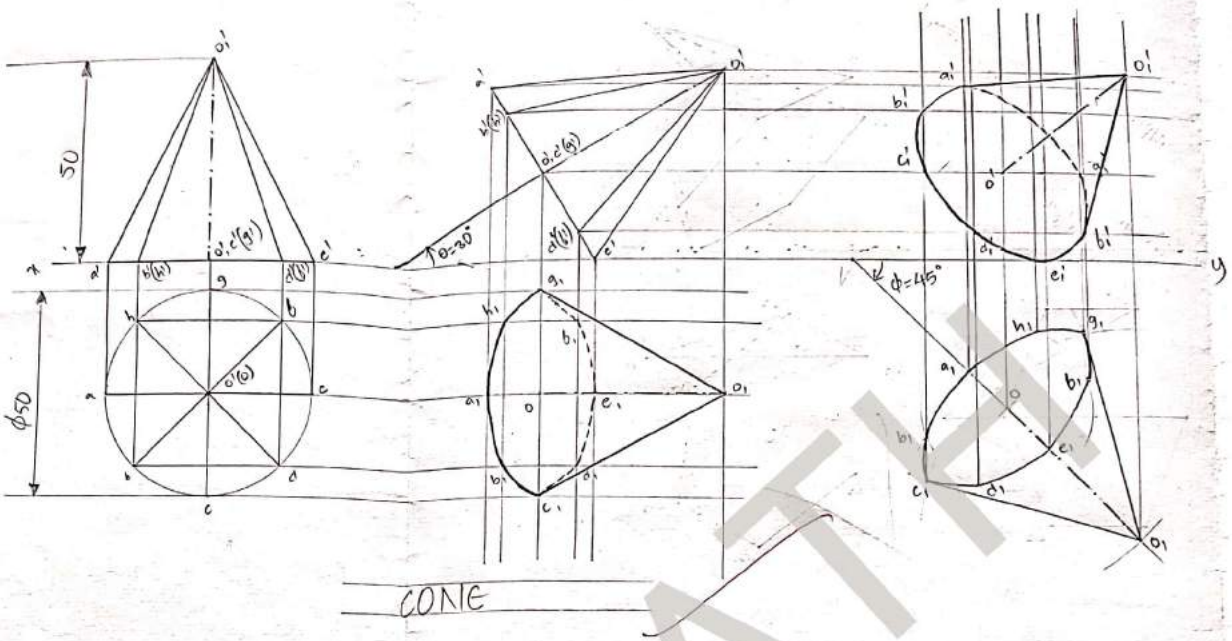

23
24
50
30
HEXAGONAL PYRAMID.

(25)

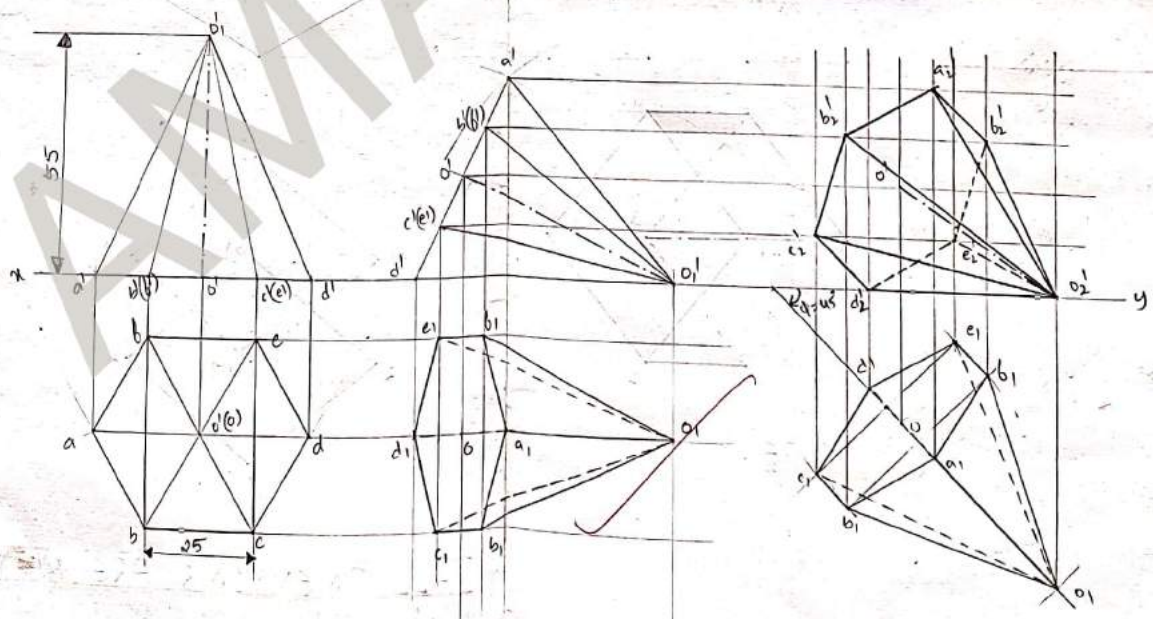


(26)

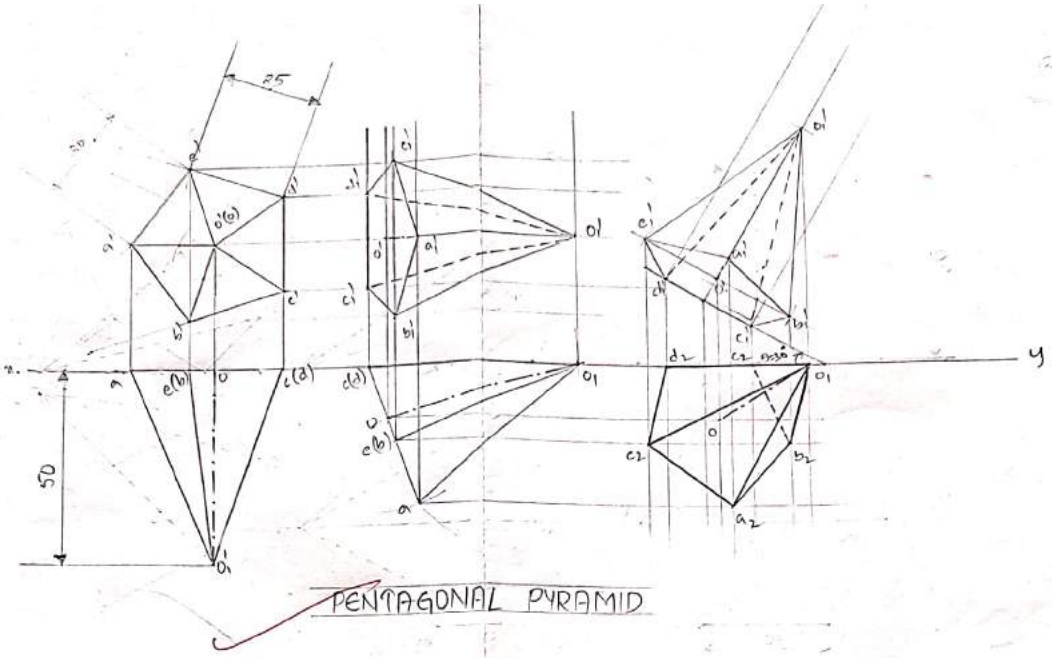

1'
o'1, 2'(41)
3'
40
x
a'
o',b'(d')
4'
4(d)
o,(o)
3(c)
1(a)
40□
2(b)
r'
o'r, 2'(41)
a'
3'
o',b'(d')
c'
d1
4
a1
d
1
o
c1
3
b1
2
1'
2'
o'1
4'
a'1
3'
b'1
o'
d'
c'1
a1
b1
d1
o1
c1
2
4
3
CUBE



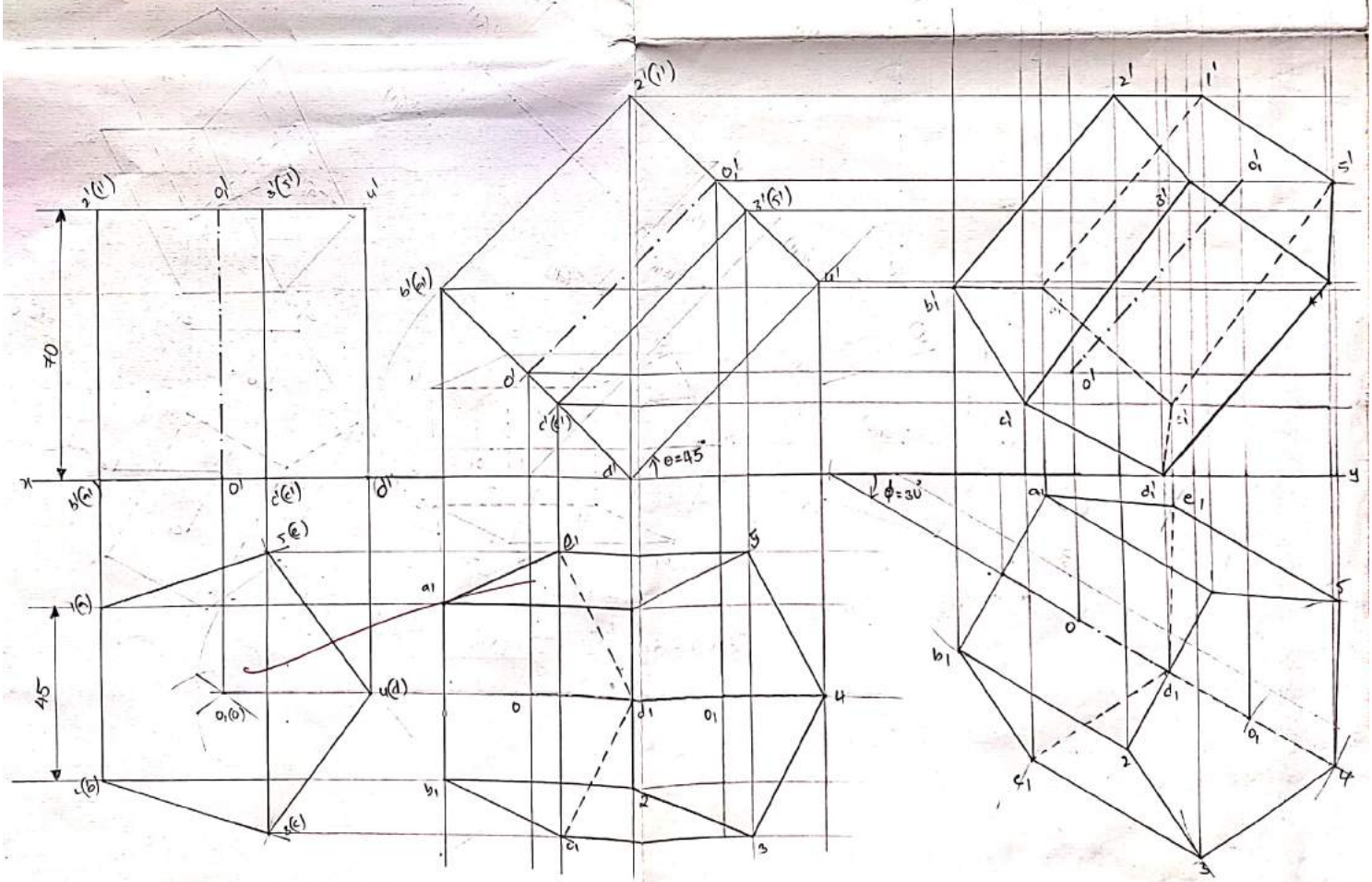
CONE



HEXAGONAL PYRAMID



PENTAGONAL PYRAMID

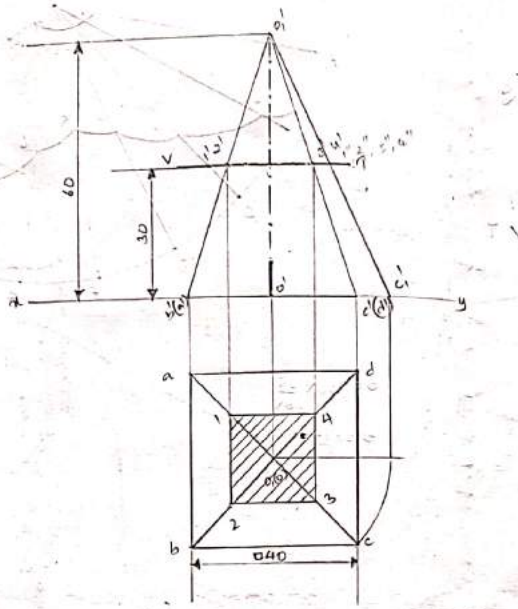


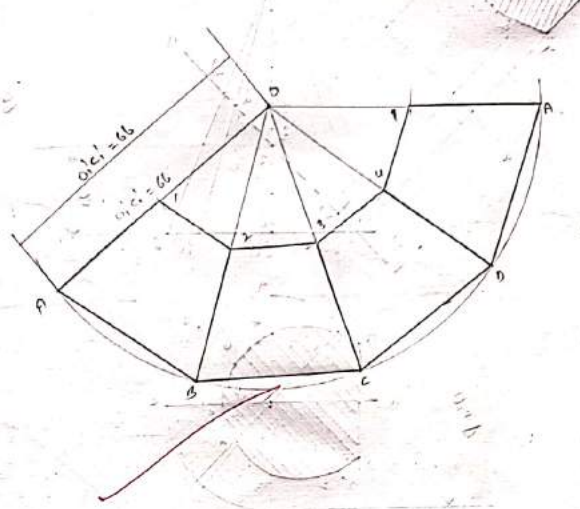
PENTAGONAL PRISM

MODEL 1 : SECTION AND DEVELOPMENT OF SURF

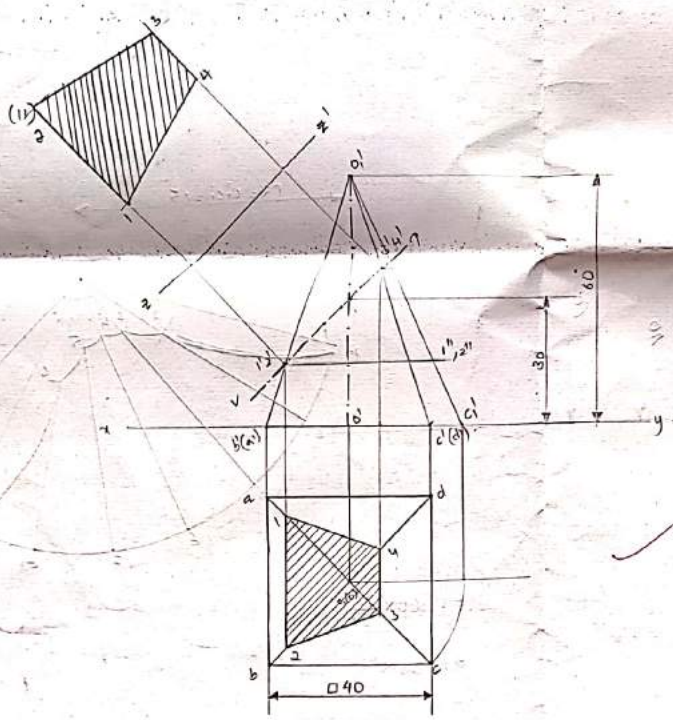
(1)

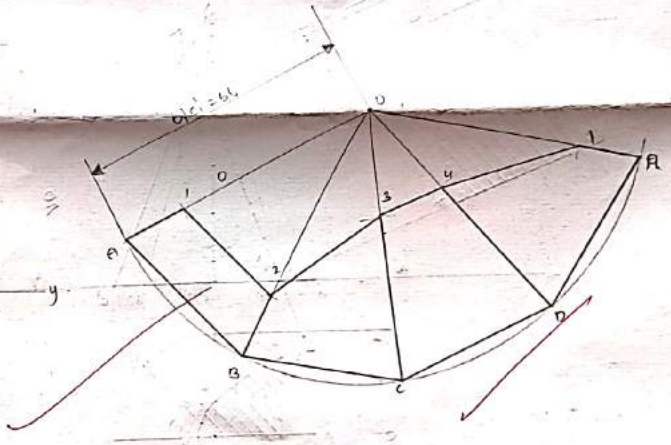
(i)



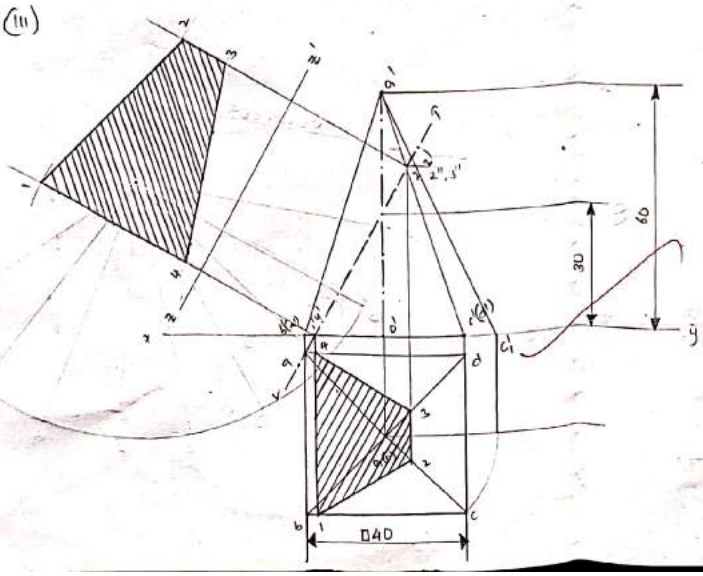


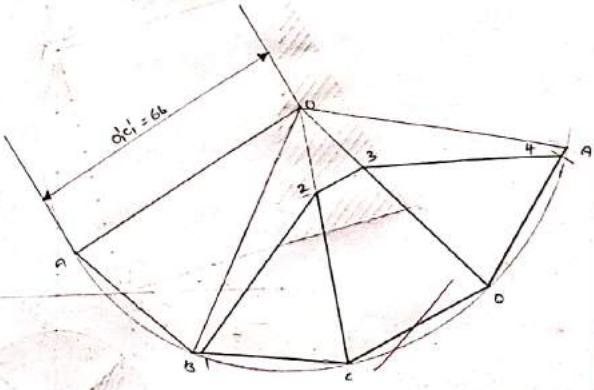
(ii)





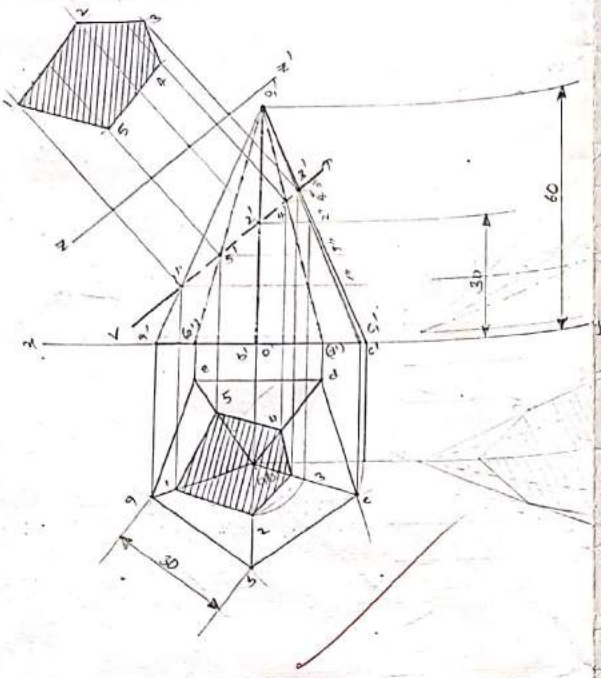
(iii)

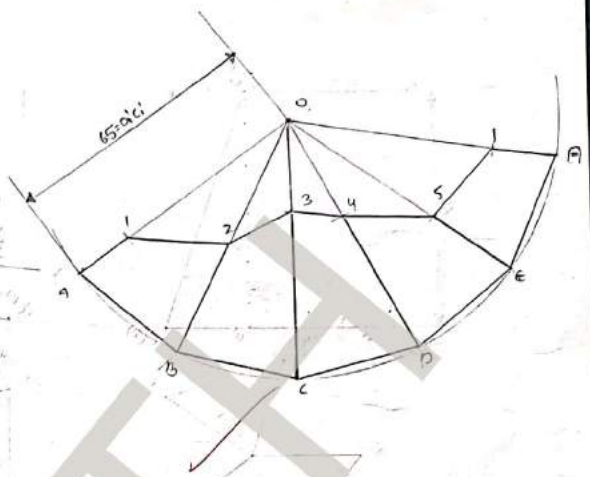




FACE OF PYRAMIDS (1 to 4)

(2)





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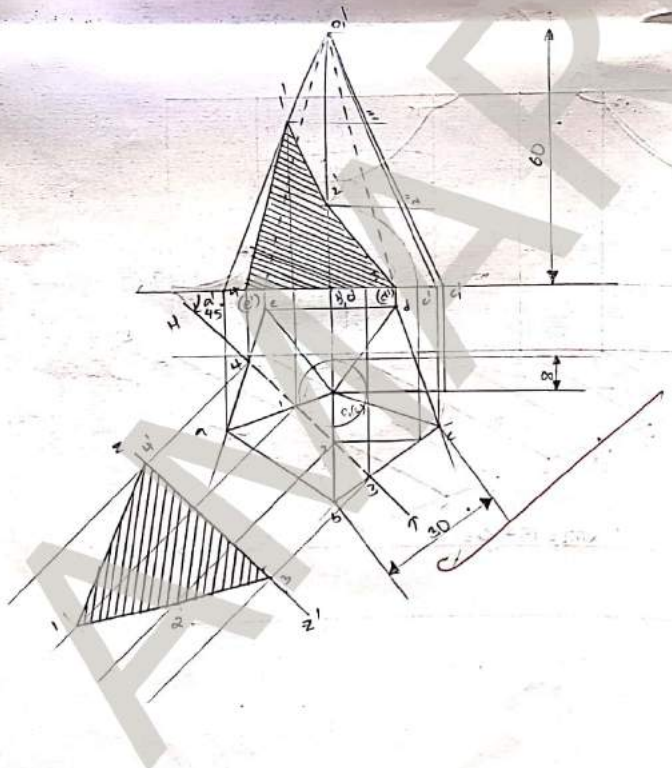
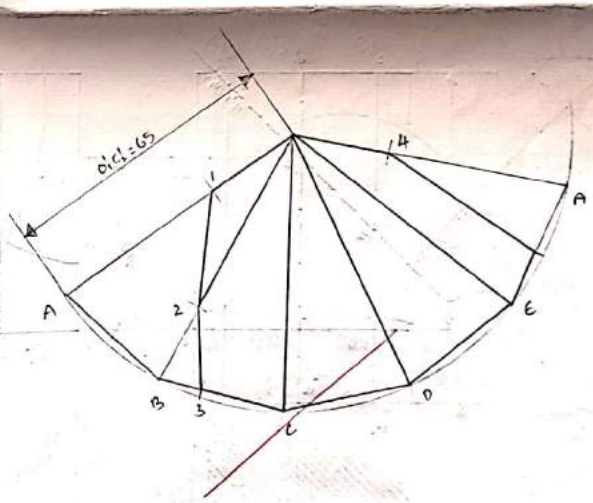




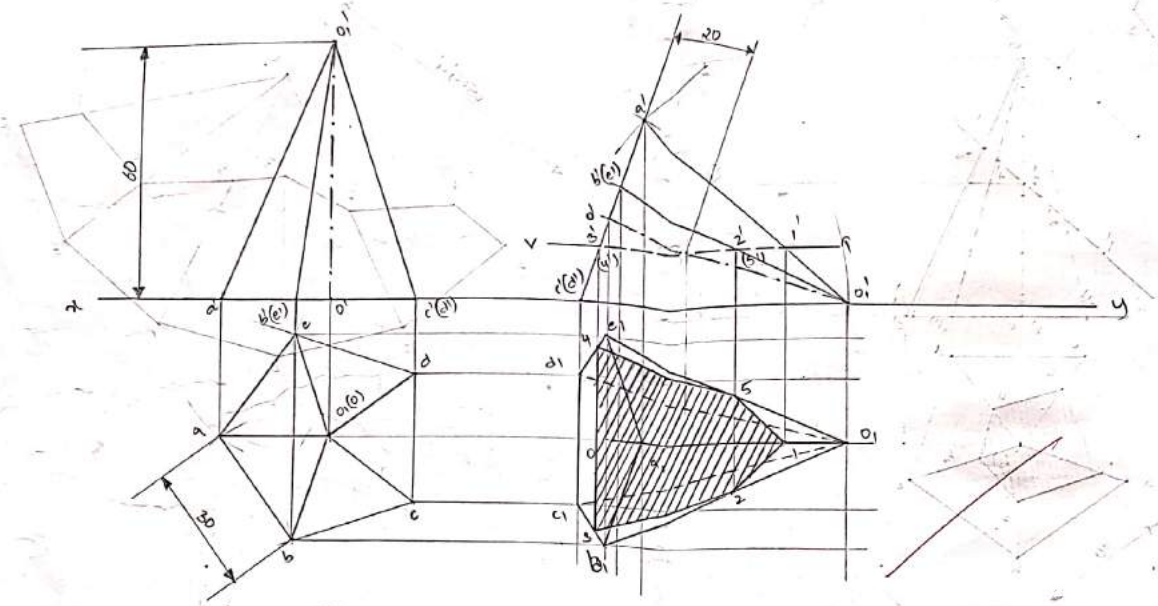
10/10 13/12/19

ALL DIMENSIONS ARE IN MM.

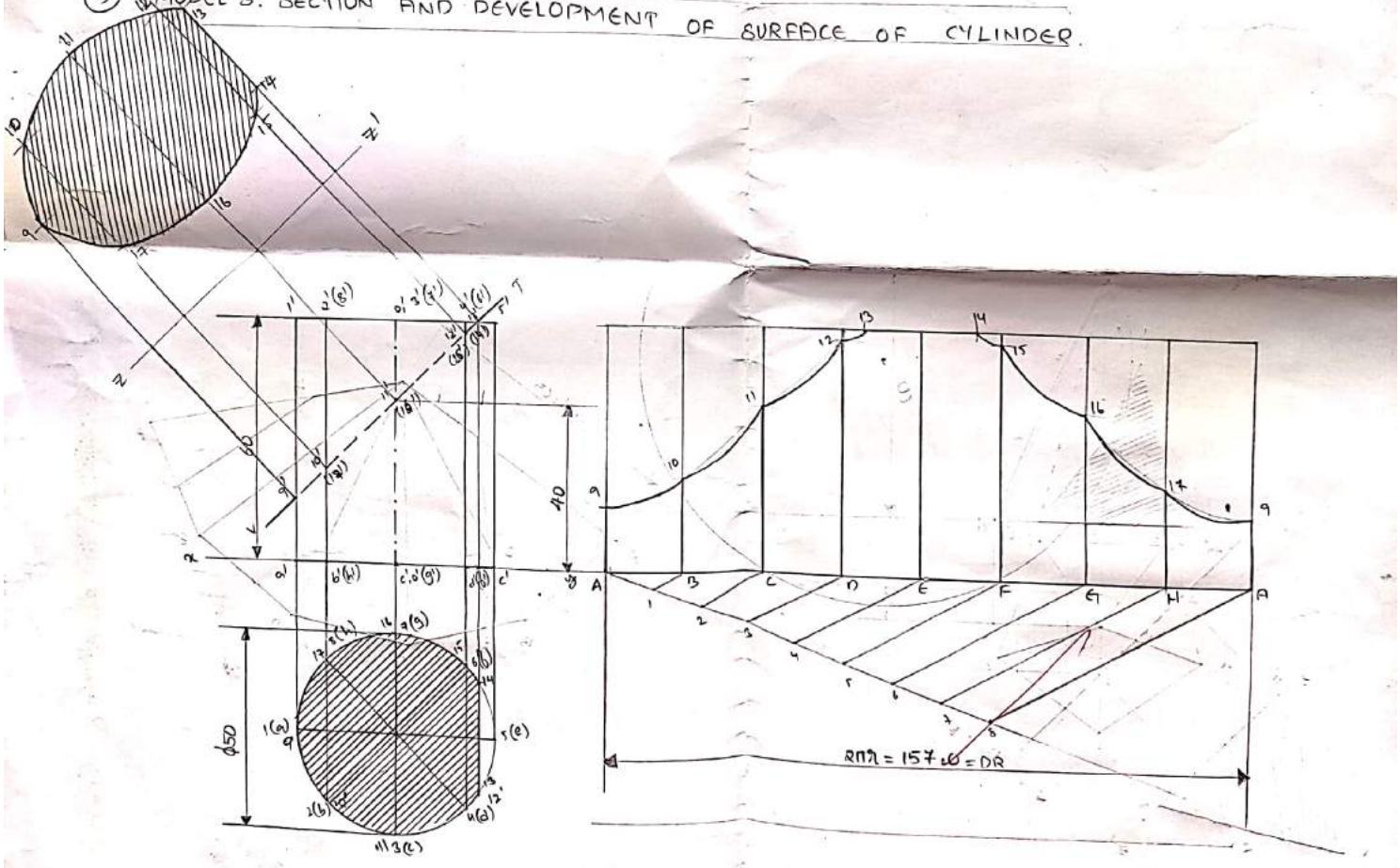
MAHATMA GANDHI INSTITUTE OF TECHNOLOGY
GANDIPET, HYDERABAD - 500 075

TITLE : SECTION OF SOLIDS AND DEVELOPMENT OF S		
NAME : G. AMARNATH		
CLASS : ECE-02		SCALE : 1:1
ROLL No. 470	DATE : 05/12/2019	SHEET No : 19

(4)

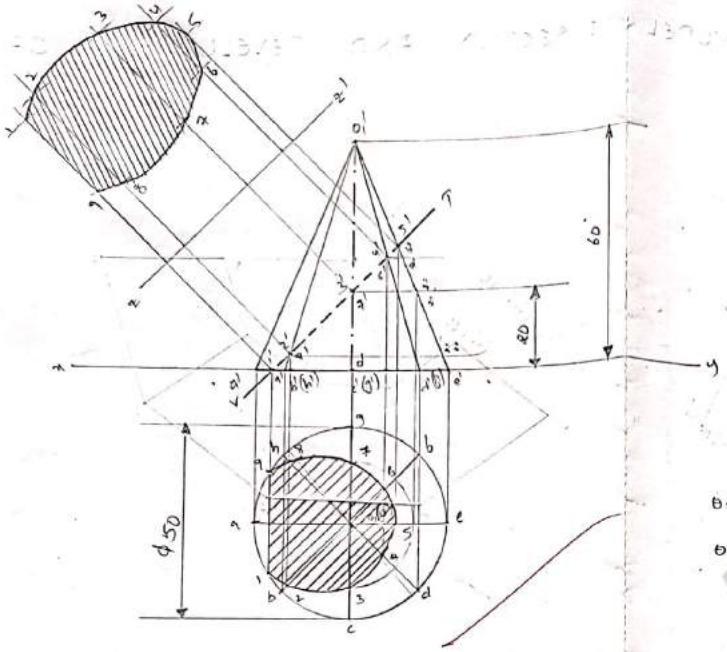


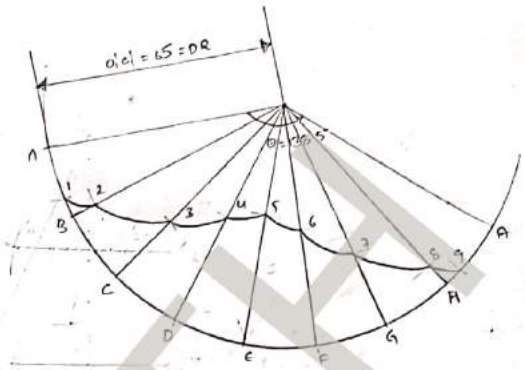
(5) MODEL 3: SECTION AND DEVELOPMENT OF SURFACE OF CYLINDER.



MODEL 2 : SECTION & DEVELOPMENT OF SURFACE OF CONE. (6 to 8)

(6)

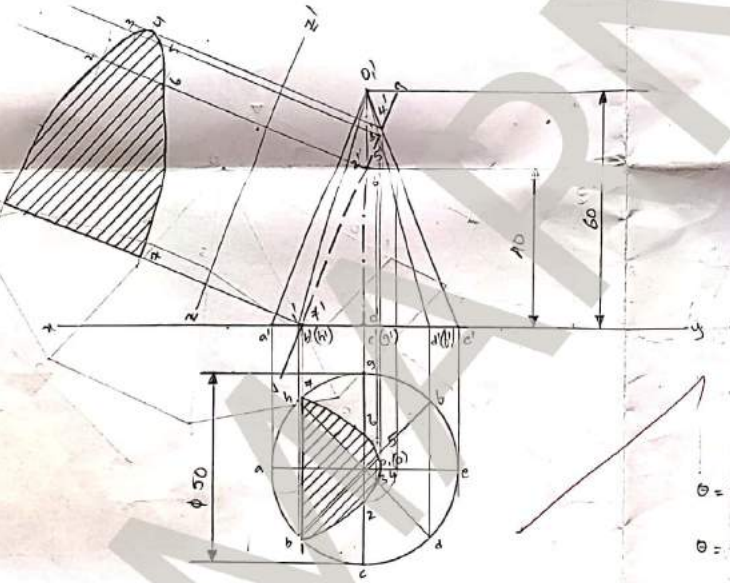


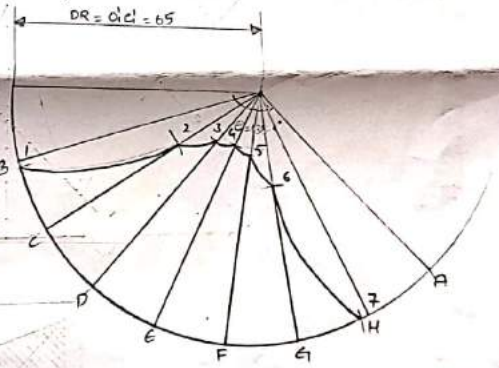


$\theta = 360 \times \frac{25}{65}$

$\theta = 138.5°$

(7)

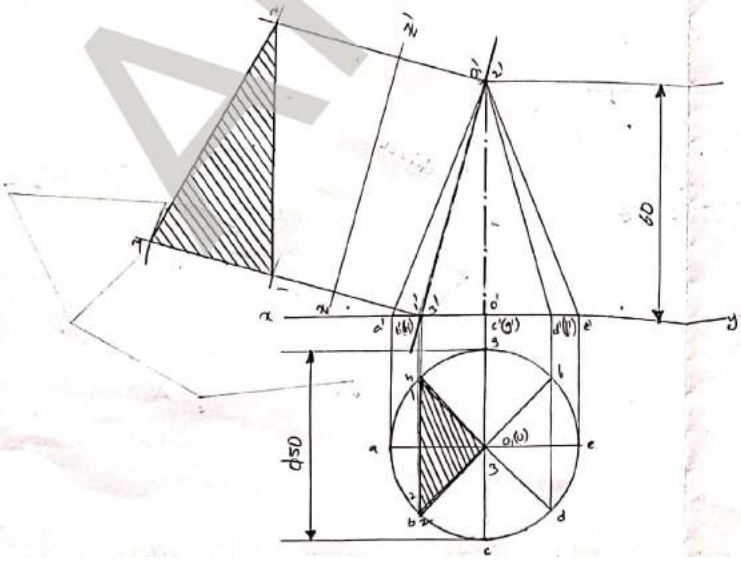


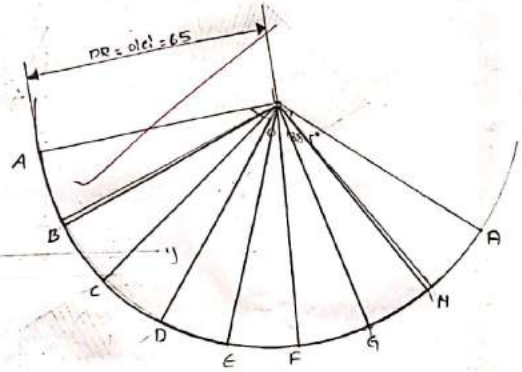


$\theta = 360 \times \frac{25}{65}$

$\theta = 138.5°$

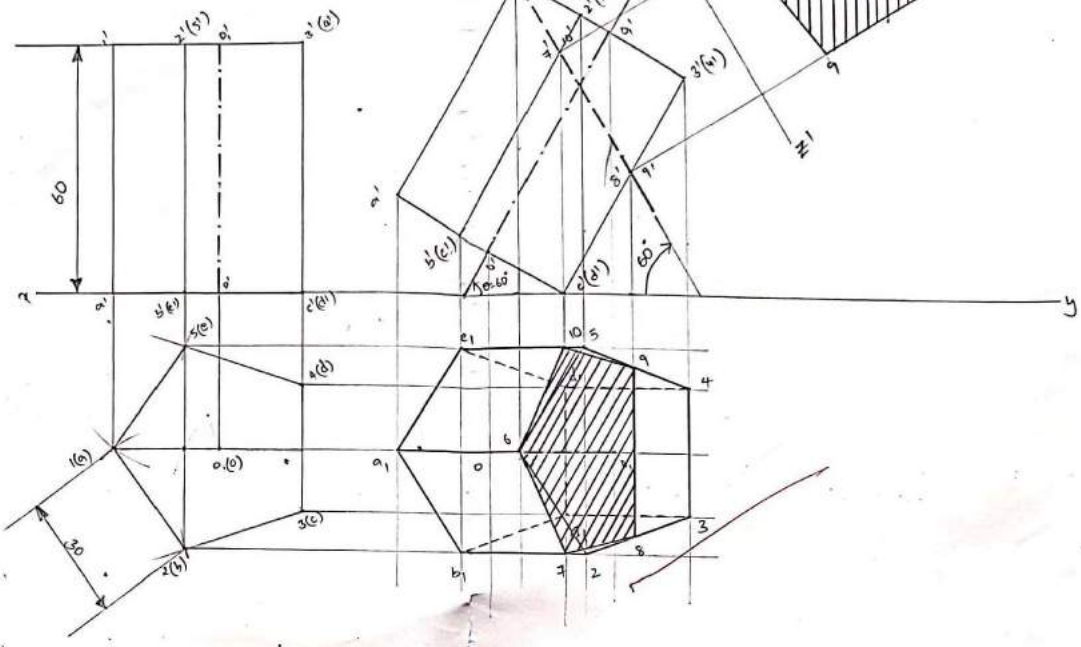
(8)



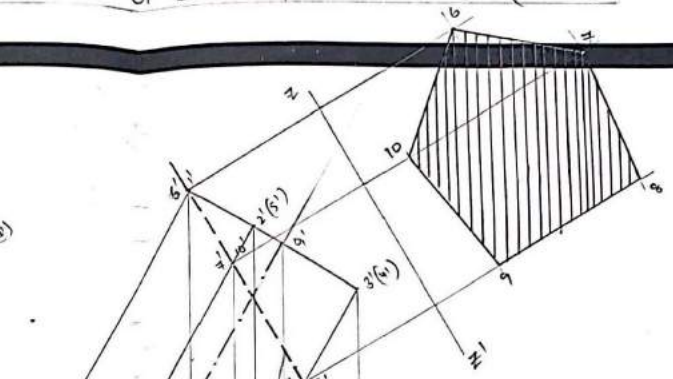


MODEL 4: SECTION & DEVELOPMENT OF SURFACES OF PRISMS (9 to 12)

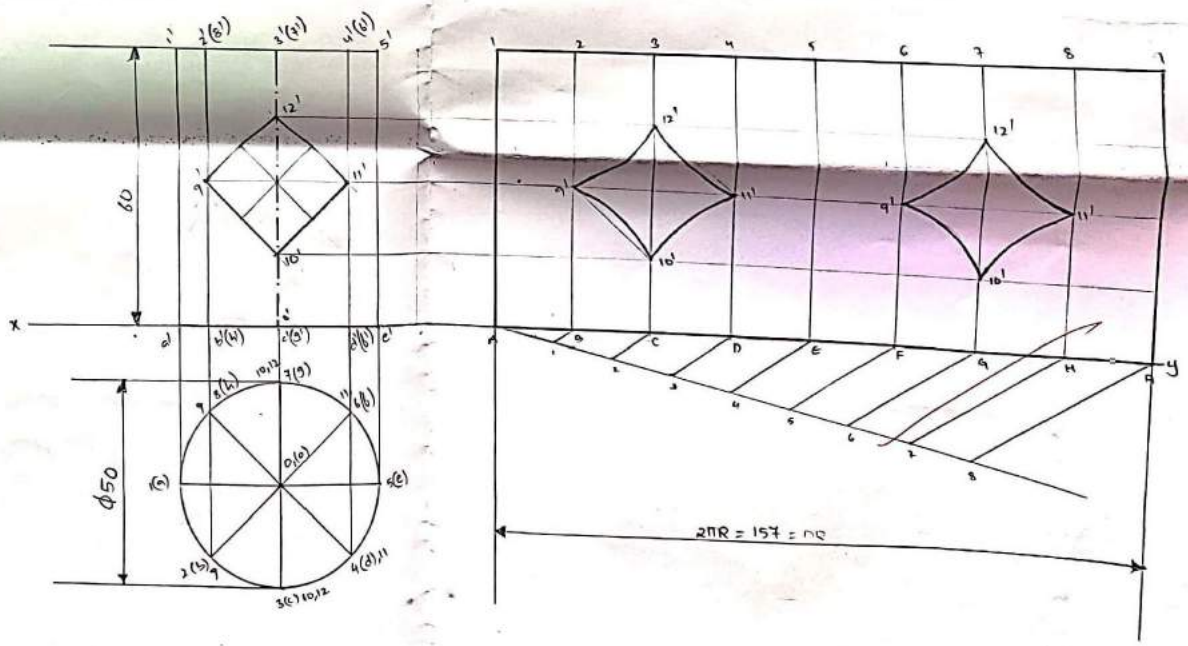
(9)



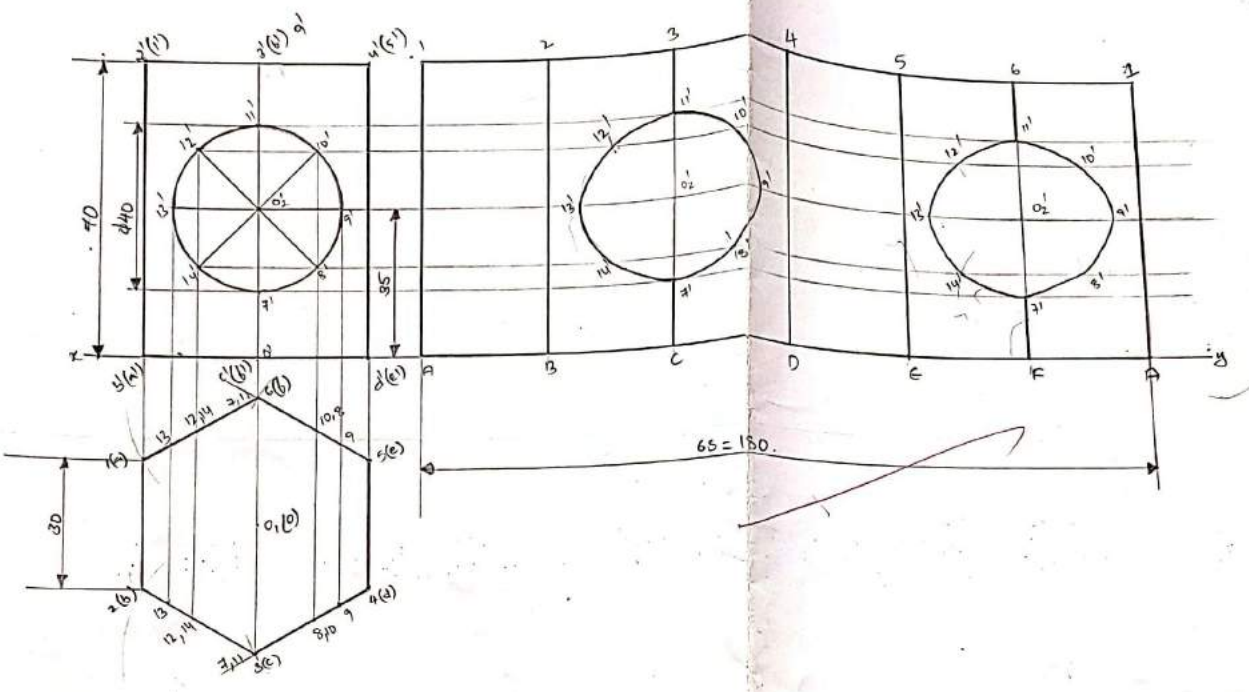
(11)



(10)



(11)



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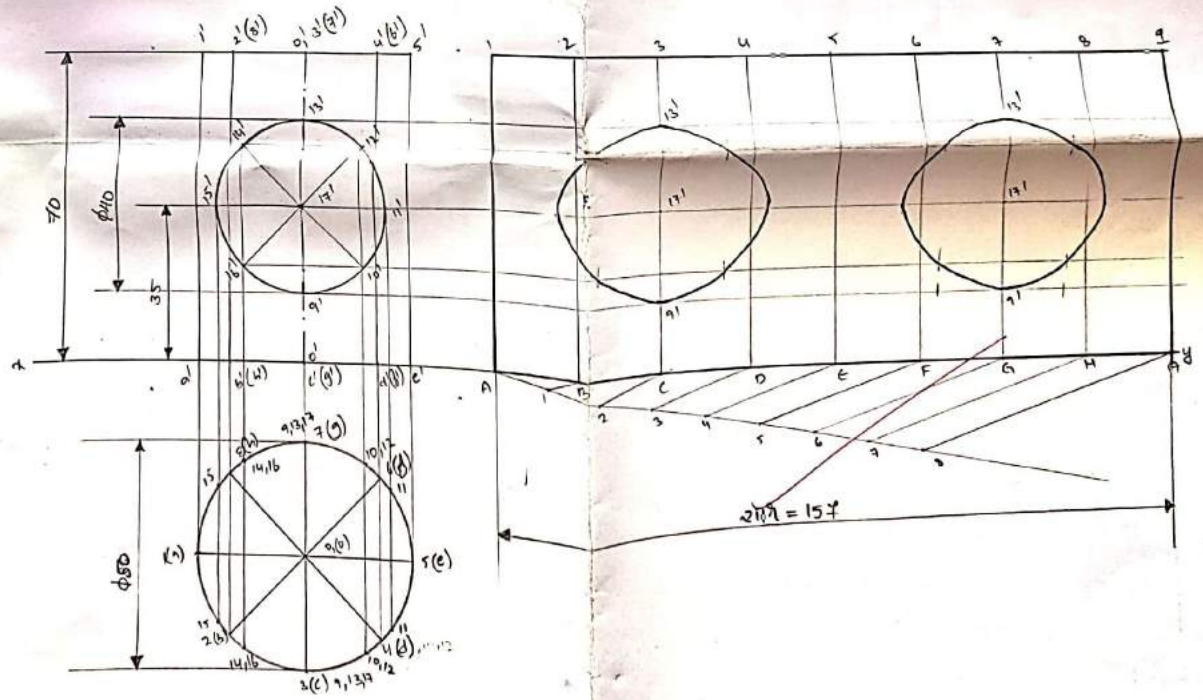
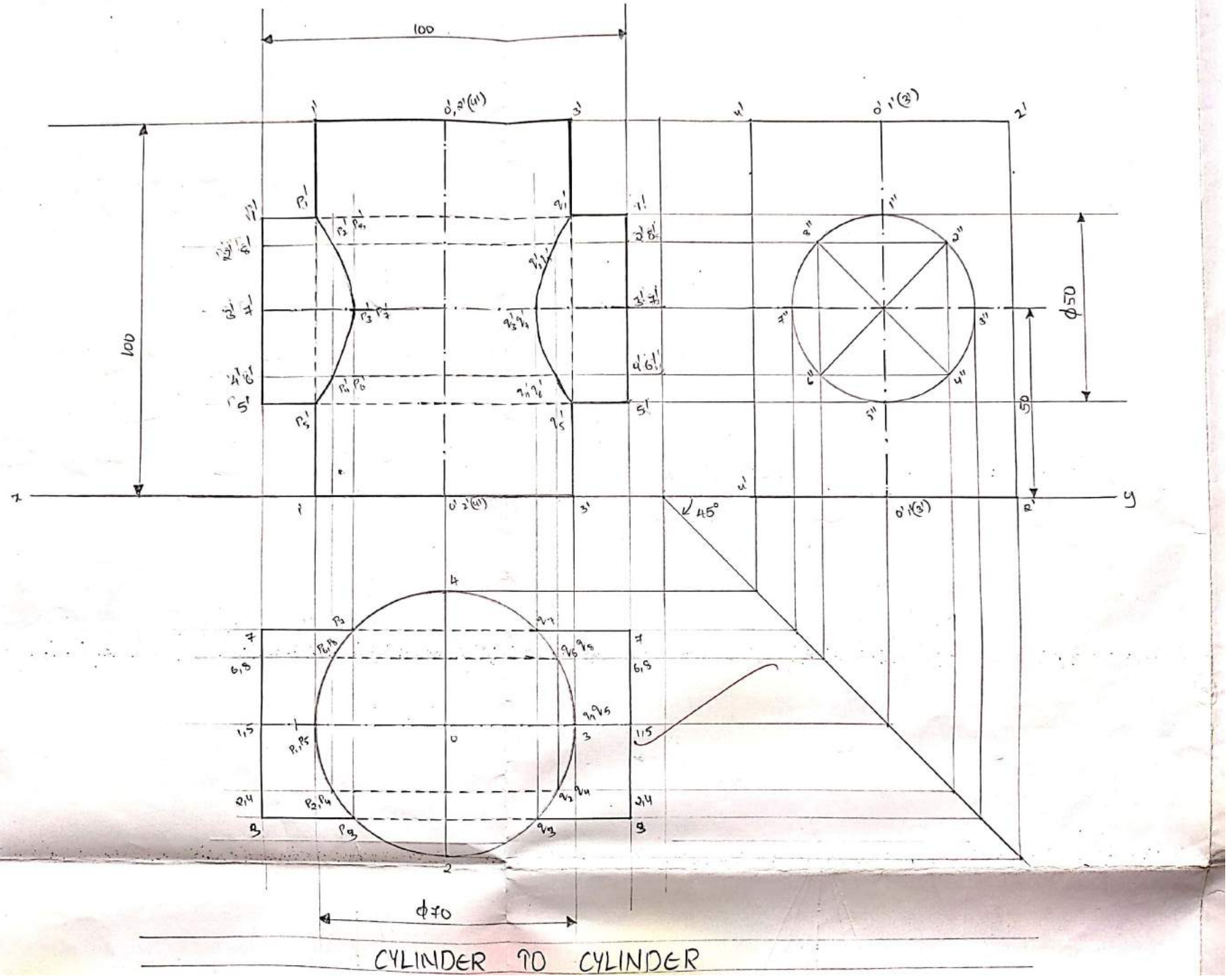
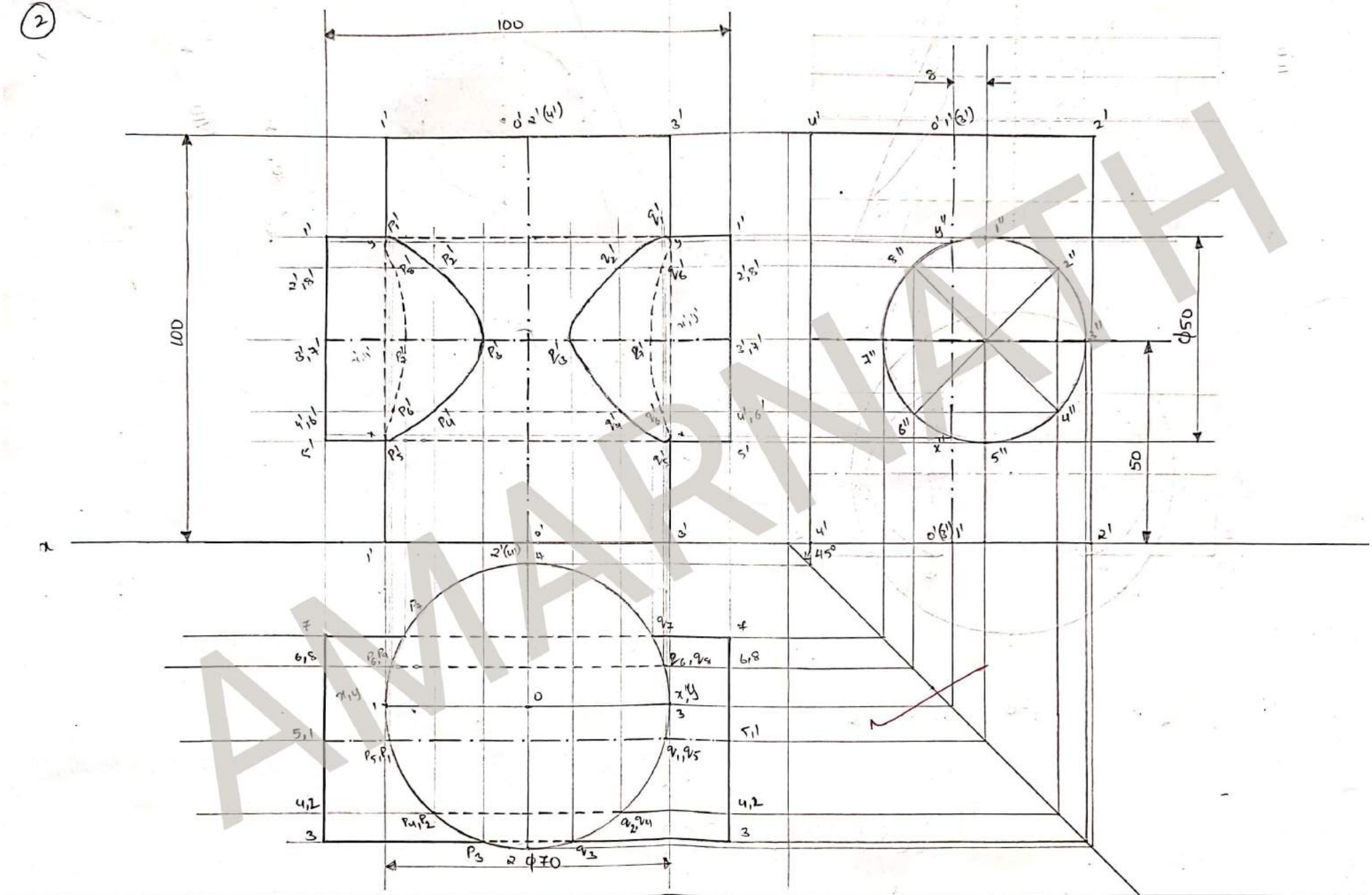


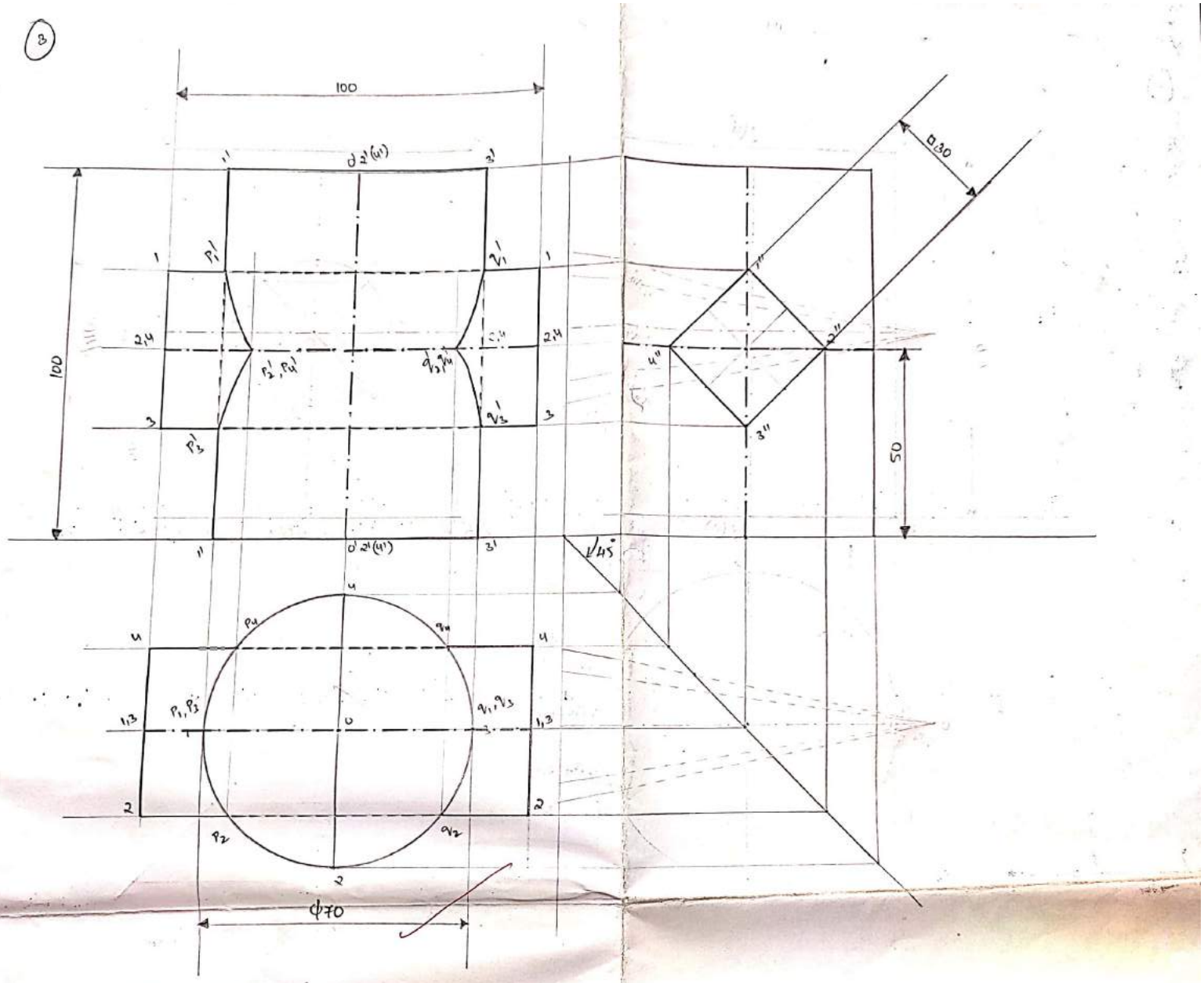

100
100
ϕ50
ϕ70
45°
CYLINDER TO CYLINDER

(2)



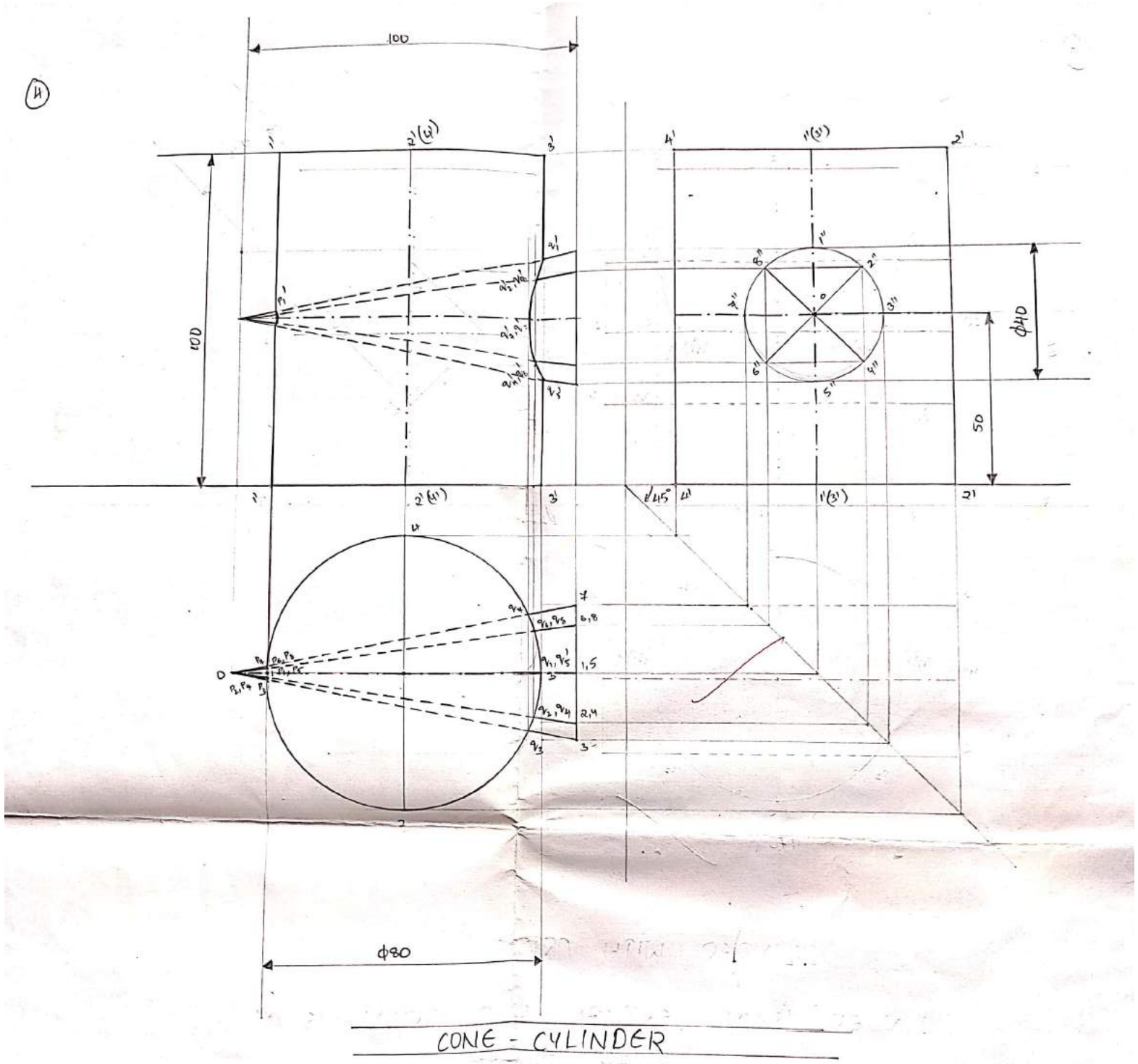
CYLINDER TO CYLINDER OFFSET.

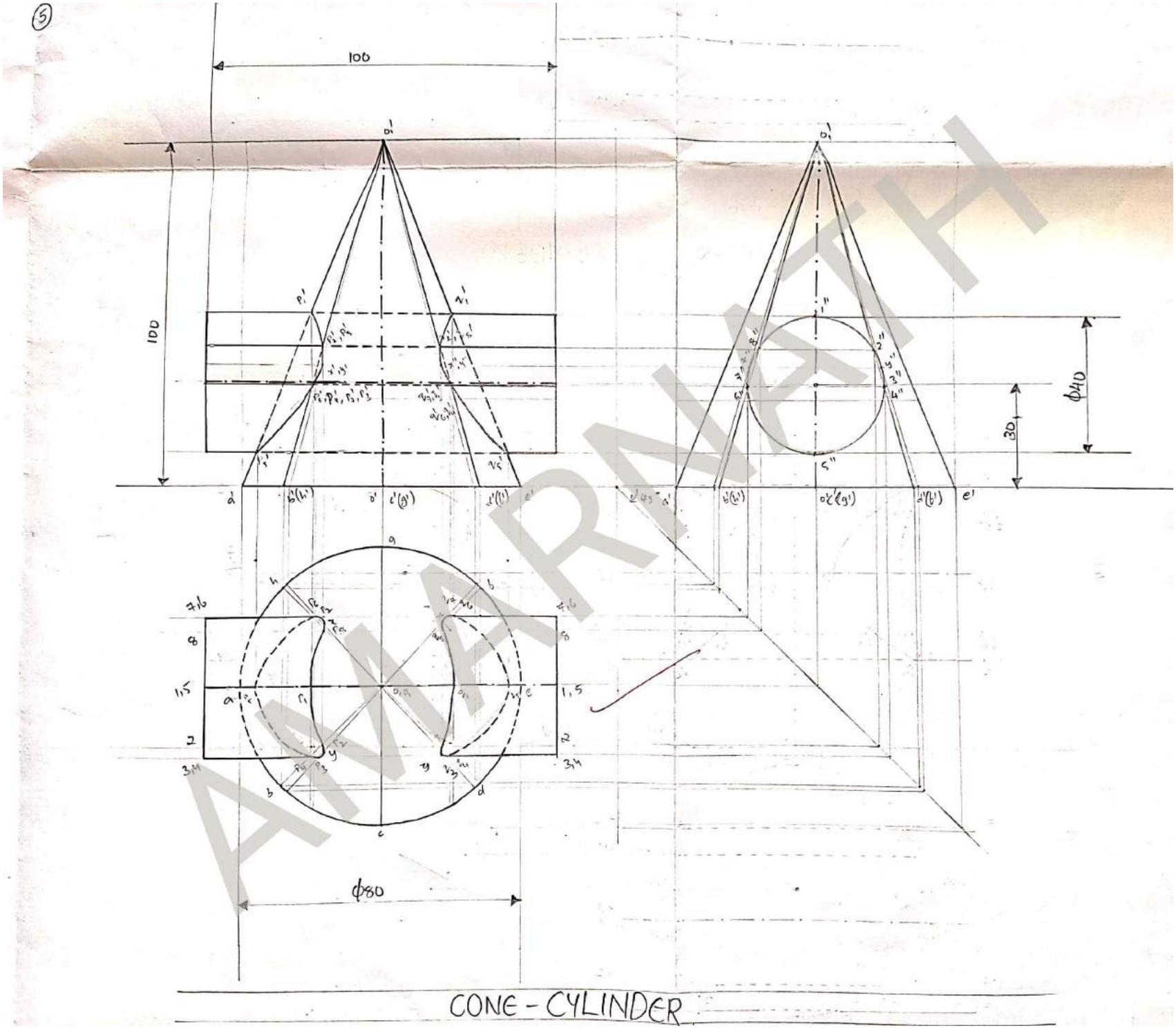
(3)

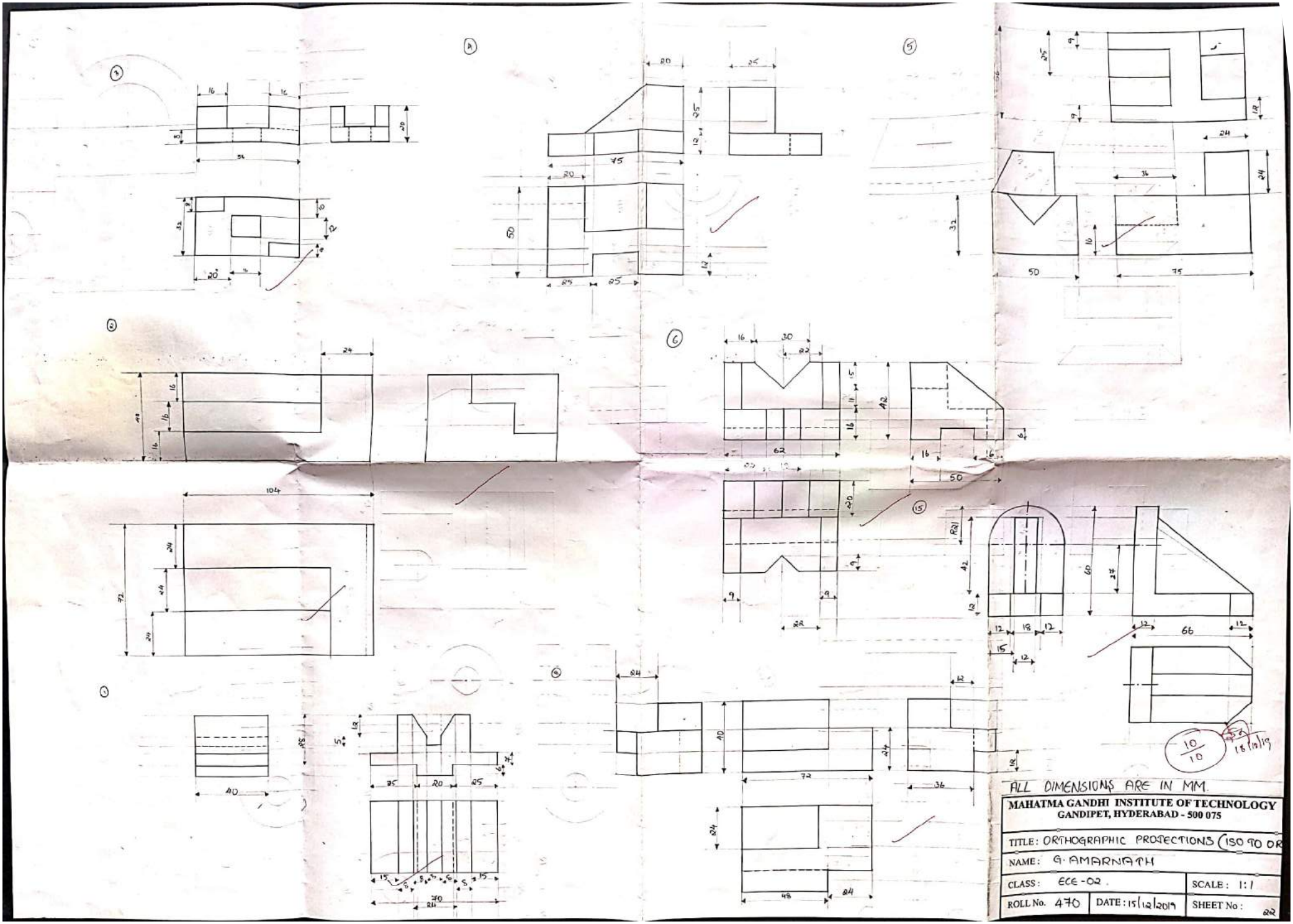


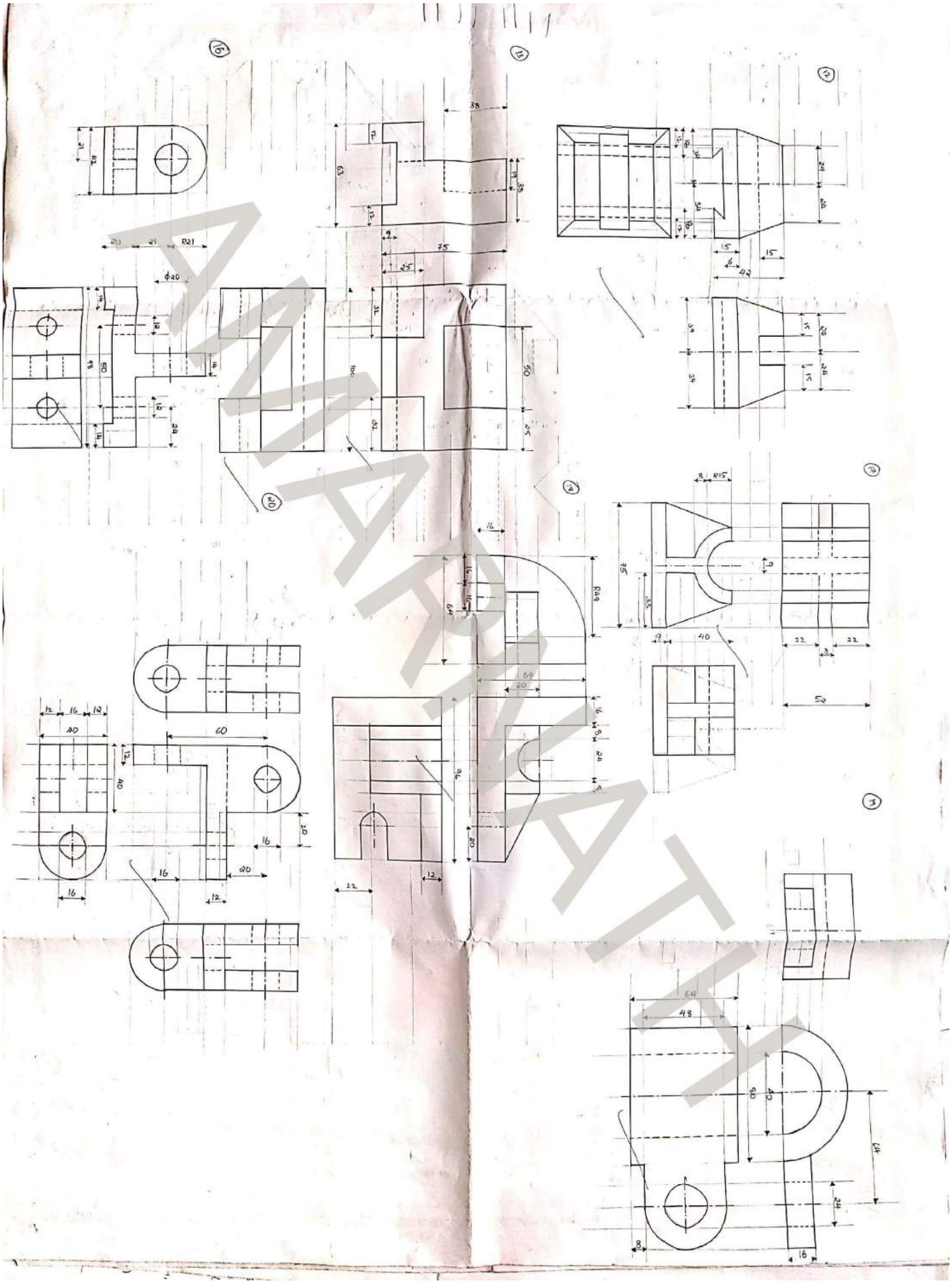
CYLINDER WITH PRISM

CYLINDER IS IN VERTICAL AND PRISM IS IN HORIZONTAL


4
100
100
ϕ80
ϕ40
50
45°
CONE - CYLINDER


100
100
30
ϕ80
ϕ40
CONE - CYLINDER


ALL DIMENSIONS ARE IN MM.
MAHATMA GANDHI INSTITUTE OF TECHNOLOGY
GANDIPET, HYDERABAD - 500 075
TITLE: ORTHOGRAPHIC PROJECTIONS (ISO 90 OR
NAME: G. AMARNATH
CLASS: ECE-02.
SCALE: 1:1
ROLL No. 470
DATE: 15/12/2019
SHEET No: 02
10/10
15/12/19


SAMPLE