



DESIGN & COMMUNICATION GRAPHICS

HIGHER & ORDINARY LEVEL

MARKING SCHEME

Pre-Leaving Certificate Examination 2024

Higher Level: page 2

Ordinary Level: page 15

HIGHER LEVEL

QUESTION A-1

- (a) Extend ad in plan to intersect the XY line (HT) 2
Find point on VT in elevation 4
Draw VT 2
- (b) Project point from plan 2
Method to establish points in elevation 5
Complete elevation 3
Hidden detail 2

Total = 20

QUESTION A-2

- (a) Locate vertex 4
Method to construct parabola 8
- (b) Method used to construct tangent 5
Draw tangent 3

Total = 20

QUESTION A-3

- (a) X_1Y_1 from TL AD 4
Required points in Aux 4
Comple Dihedral angle 2
- (b) Establish TL method 5
Complete 5

Total = 20

QUESTION A-4

- Plane containing AB 5
Edge view 5
2nd Aux at 90 5
Horizontal distance 3
Label angle of inclination 2

Total = 20

QUESTION B-1

- (a) Trimetric axes 6
Scalene triangle 8
- (b) Correct development of XY plane 6
Elevation 6
Correct development of XZ plane 6
- (c) Trimetric projection
Base 4
Curve 8
45 slope section 8
25 slope section 8

Total = 60

QUESTION B-2

- (a) Elevation abe 5
Plan abe 5
Elevation abcd 5
plan ancd 5
- (b) Dihedral Angle
 X_1Y_1 parallel to LOI 5
Projection of LOI and plane 5
 X_2Y_2 perpendicular to LOI 4
Projection of abe abcd indicating dihedral angle 4
- (c) True Shape
Apply true lengths 5
Method used 5
- (d) Determine VT 4
Determine HT 4
Method used 4

Total = 60

QUESTION B-3

- (a) Plan of cube 6
Elevation of cube 4
Cross section of triangular prism 6
Elevation of prism 5
Plan of prism 8
- (b) Elevation of intersection points with vertical surface of cube 7
Plan of intersection points with top of surface of cube 6
Cross over points 8
Lines of interpenetration including hidden detail 10

Total = 60

QUESTION C-1

(a)	A-C Level road	
	Cut	5
	Fill	5
	Complete Curve	6
(b)	B-D Rising	
	Cut Arc 10mm	6
	Parallel Lines	4
	Curves	4
	Fill Arc 20mm	6
	Parallel Lines	4
	Curves	4
	X ₁ Y ₁	4
	P Q R (3x2)	6
	Point S (thickness)	6

Total = 60**QUESTION C-2**

(a)	Draw plan of base circle	7
	Elevation of base circle	7
	Plan & elevation of 40m	
	Element	13
	Determine base circle	13
	Method for curve & complete	7
(b)	Draw parabola	6
	Complete projections in plan	7

Total = 60**QUESTION C-3**

(a)	Plan	15
(b)	Elevation	18
(c)	Dihedral Angle	
	X ₁ Y ₁	9
	X ₂ Y ₂	9
(d)	True Shape Surface A	9

Total = 60**QUESTION C-4**

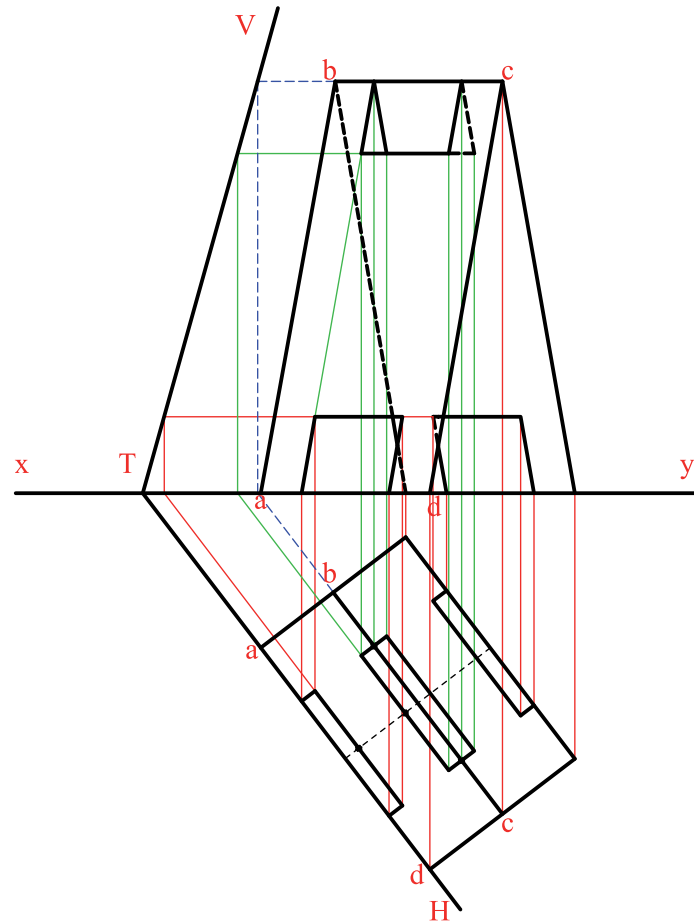
(a)	Link Mechanism	4
	Draw line diagram and 90° arc	4
	Divide circle into equal parts	10
	Locate positions point C	3
	Draw Locus	3
	Machine guard around mechanism	4
(b)	Displacement Diagram	
	360° divisions	3
	0°-180° Rise UAR	6
	180°-270° Dwell	2
	270°-360° Fall UV	3
	Complete Displacement diagram	3
	Draw cam profile	10
	Presentation complete	5

Total = 60**QUESTION C-5**

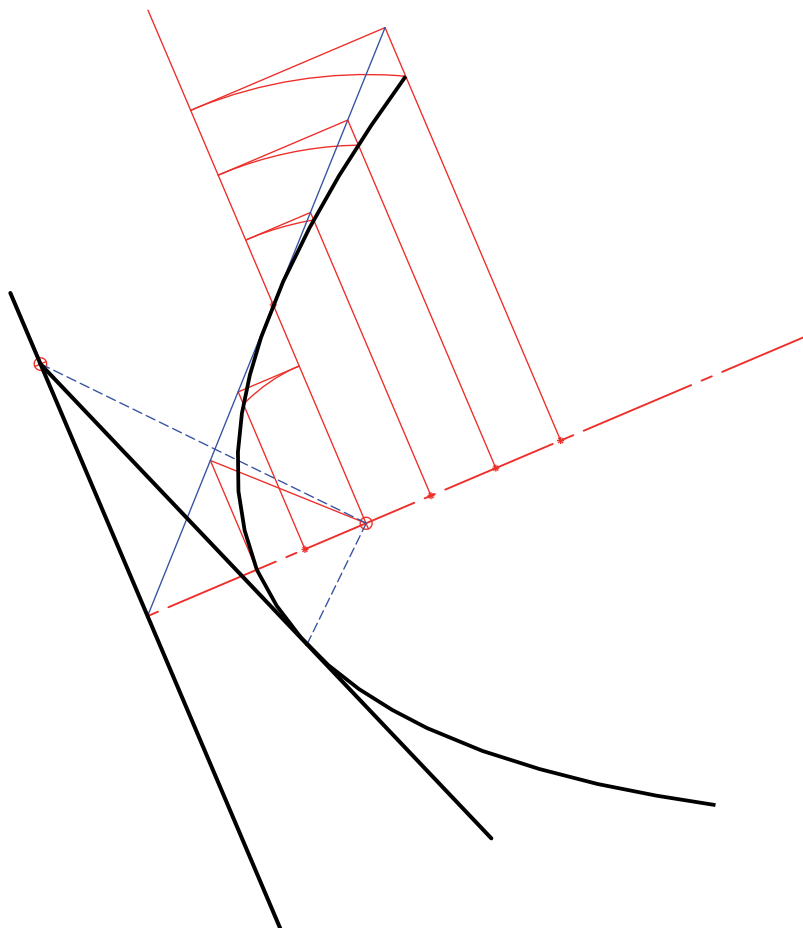
	Relative assembly of parts 6x3	18
	Sectional Elevation	27
	Presentation	5
	Hatching	5
	Centrelines	5

Total = 60

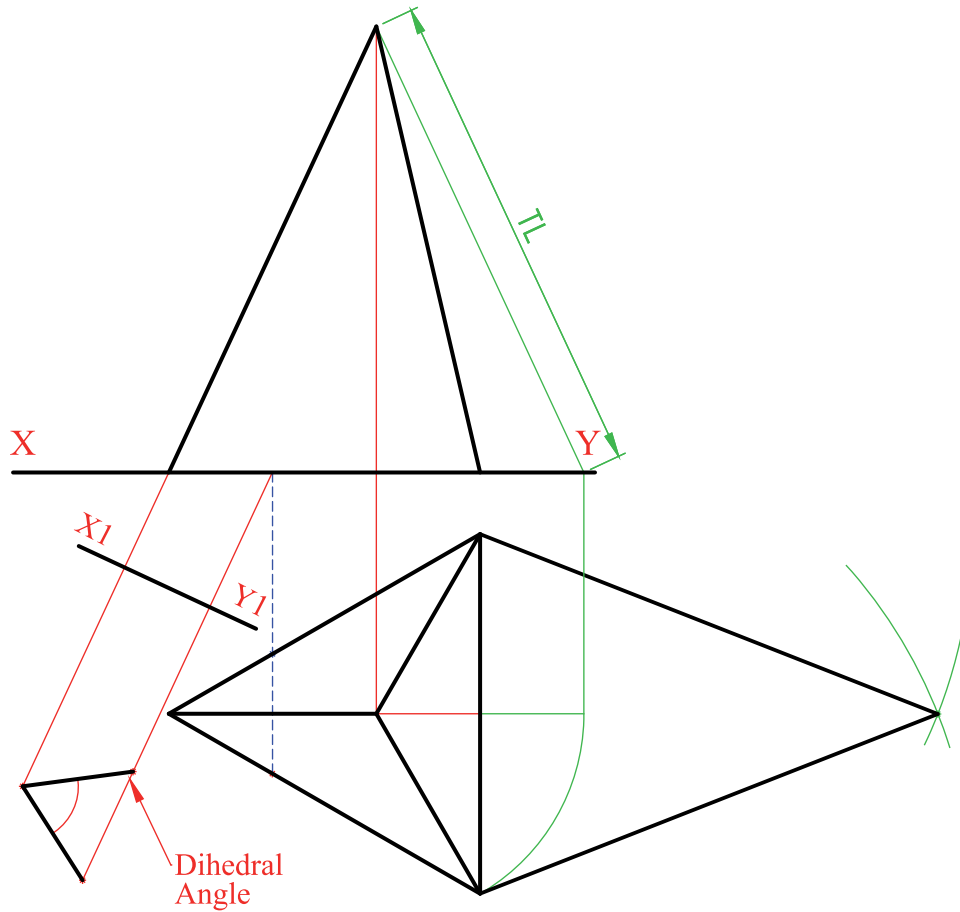
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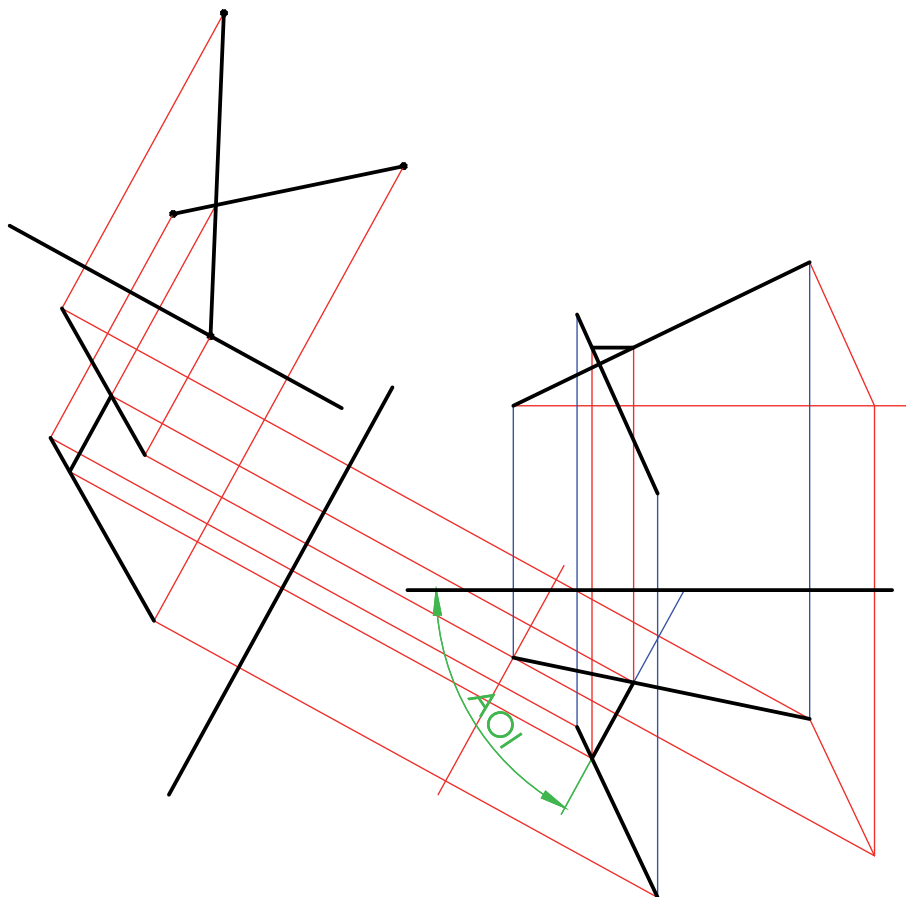
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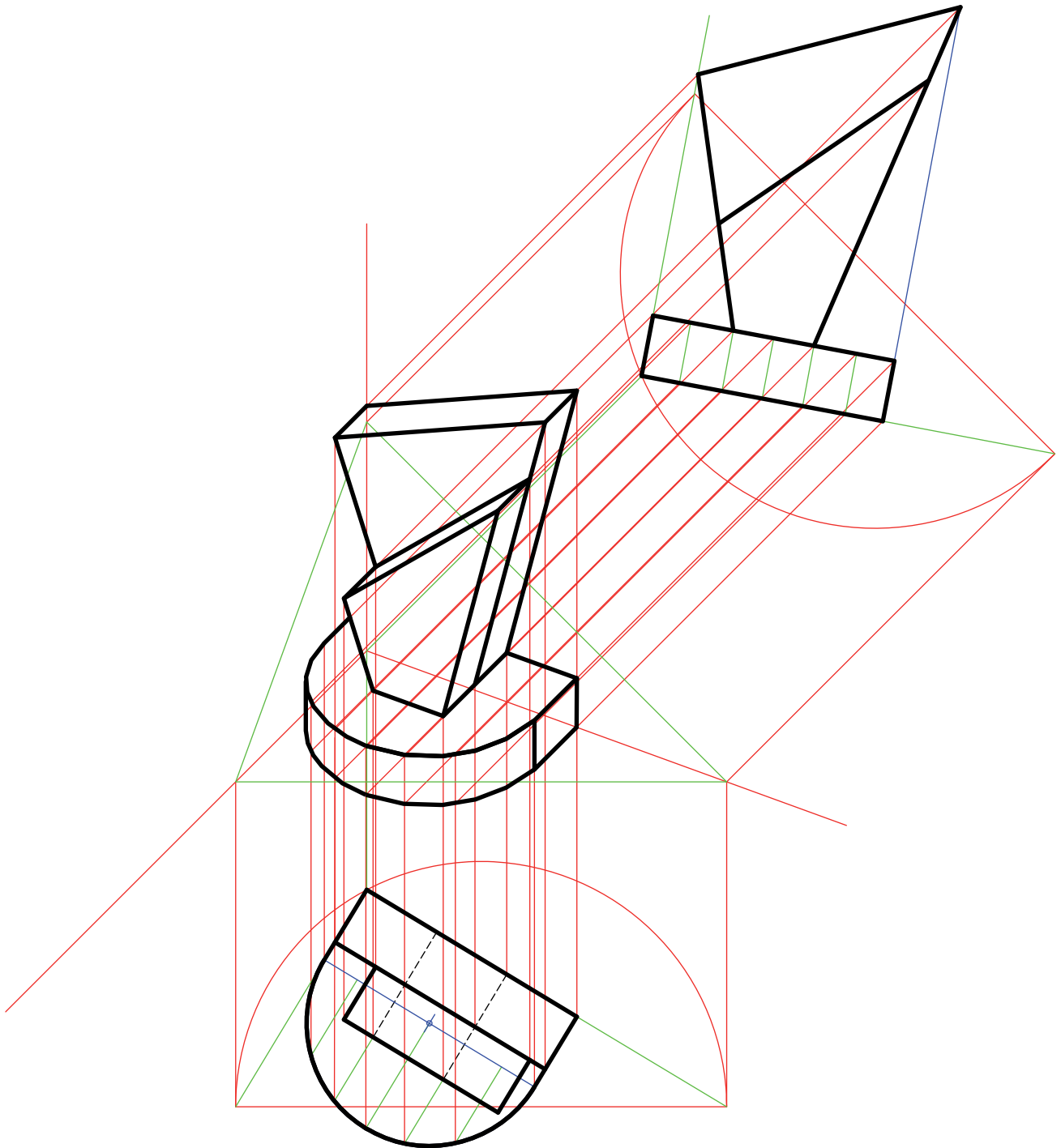
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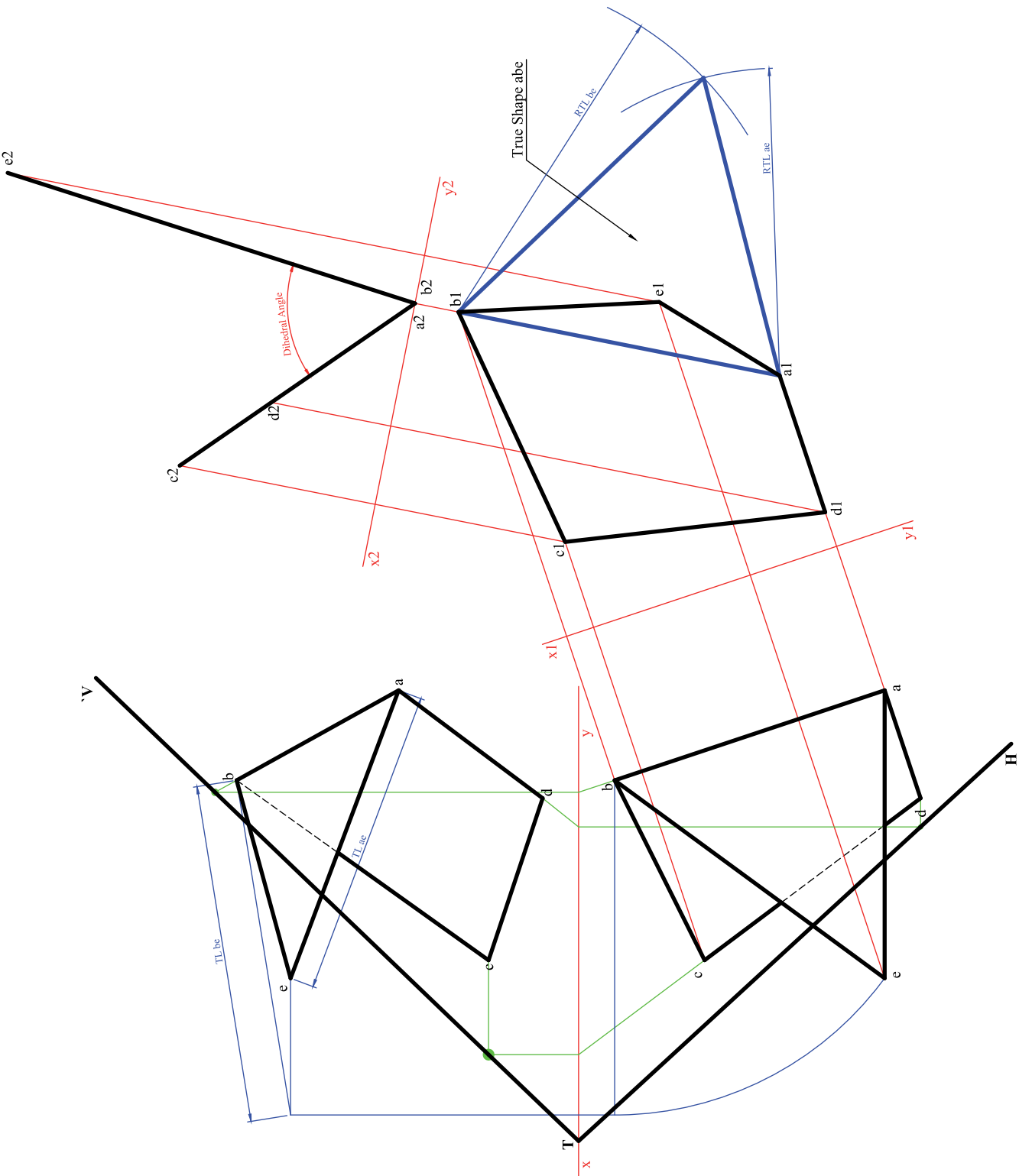
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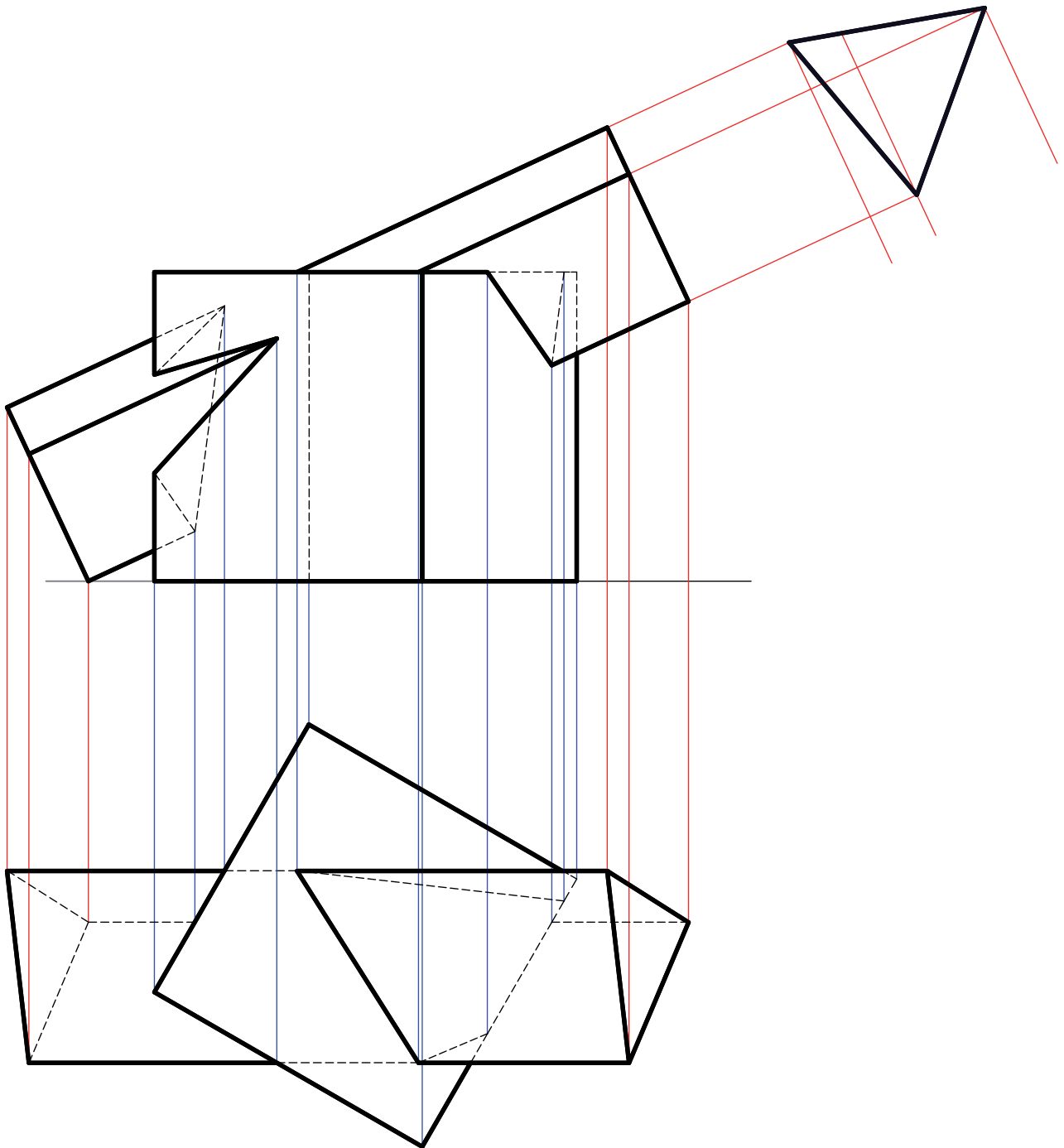
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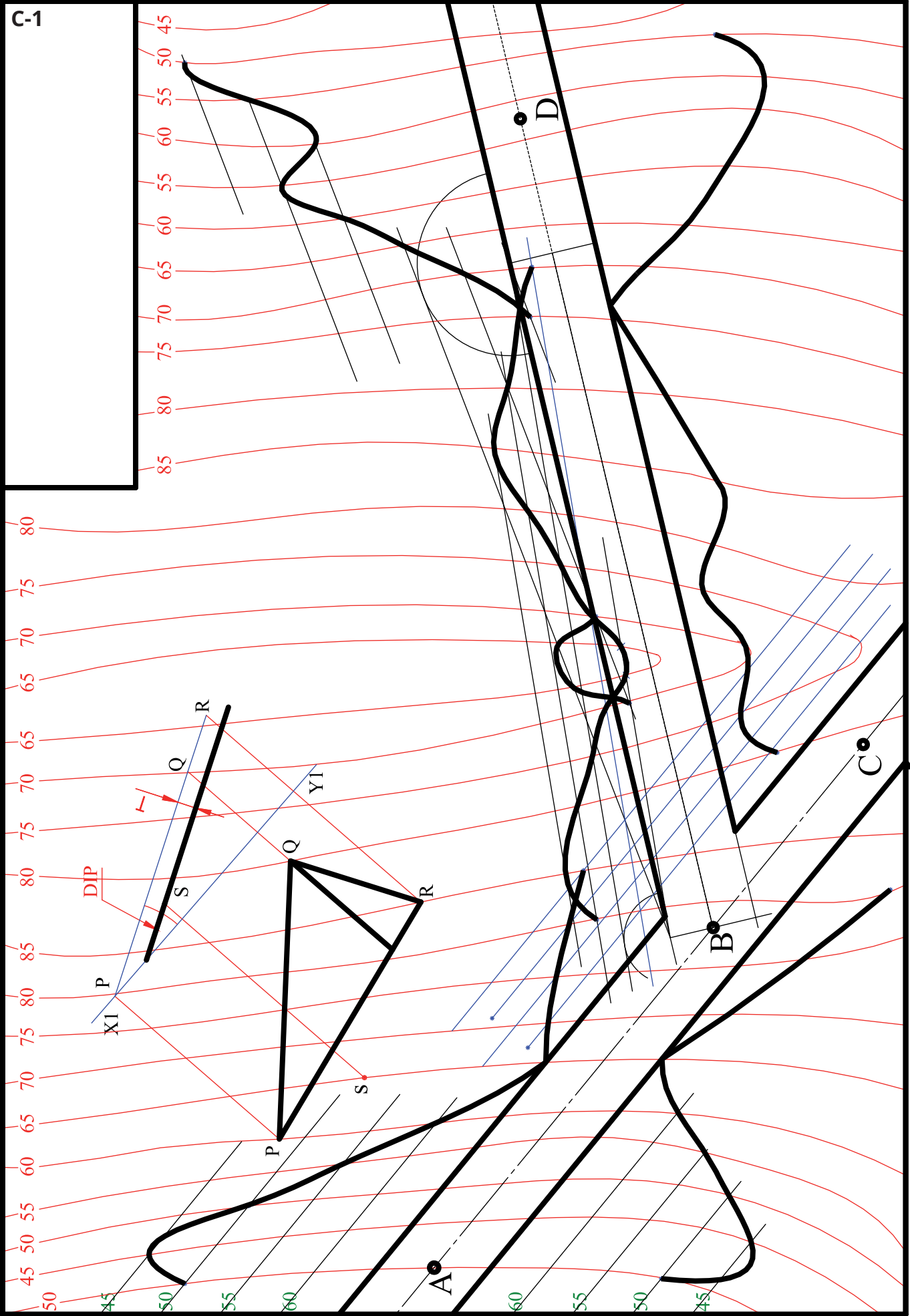


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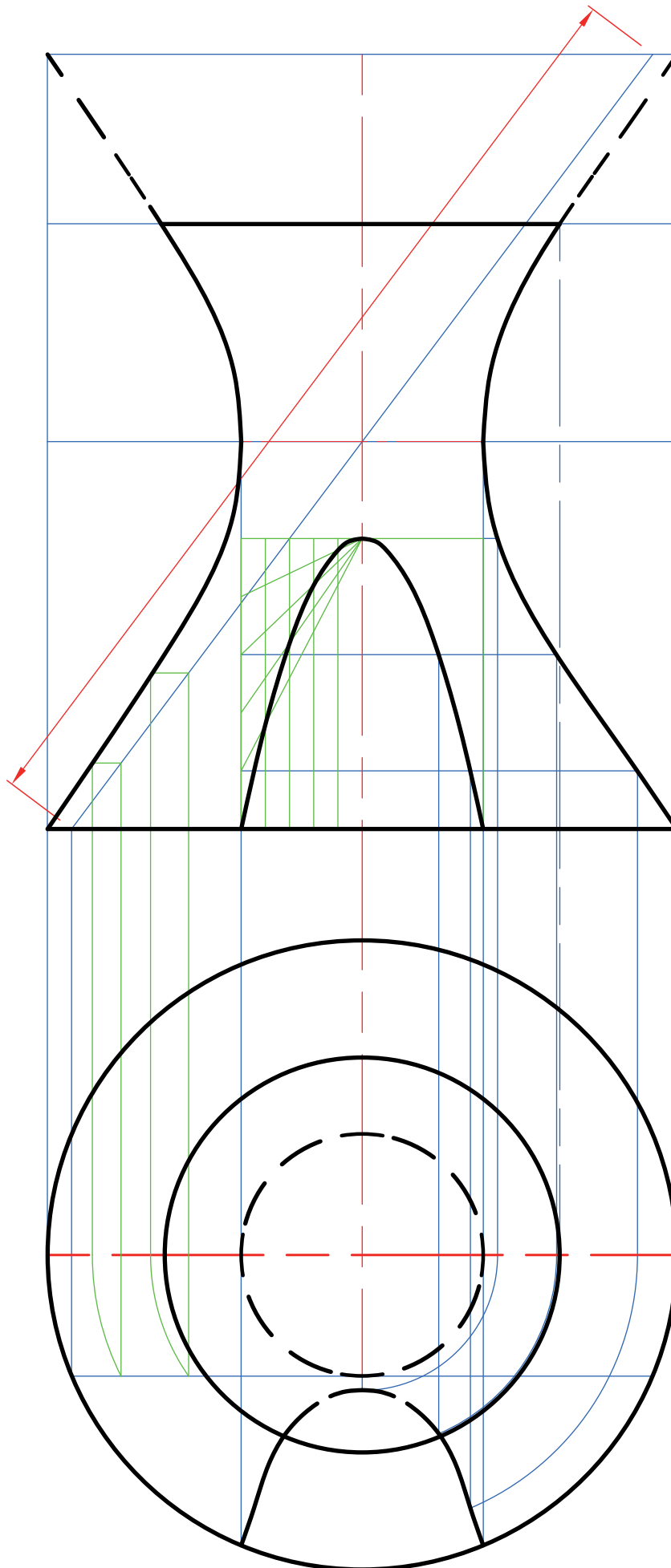


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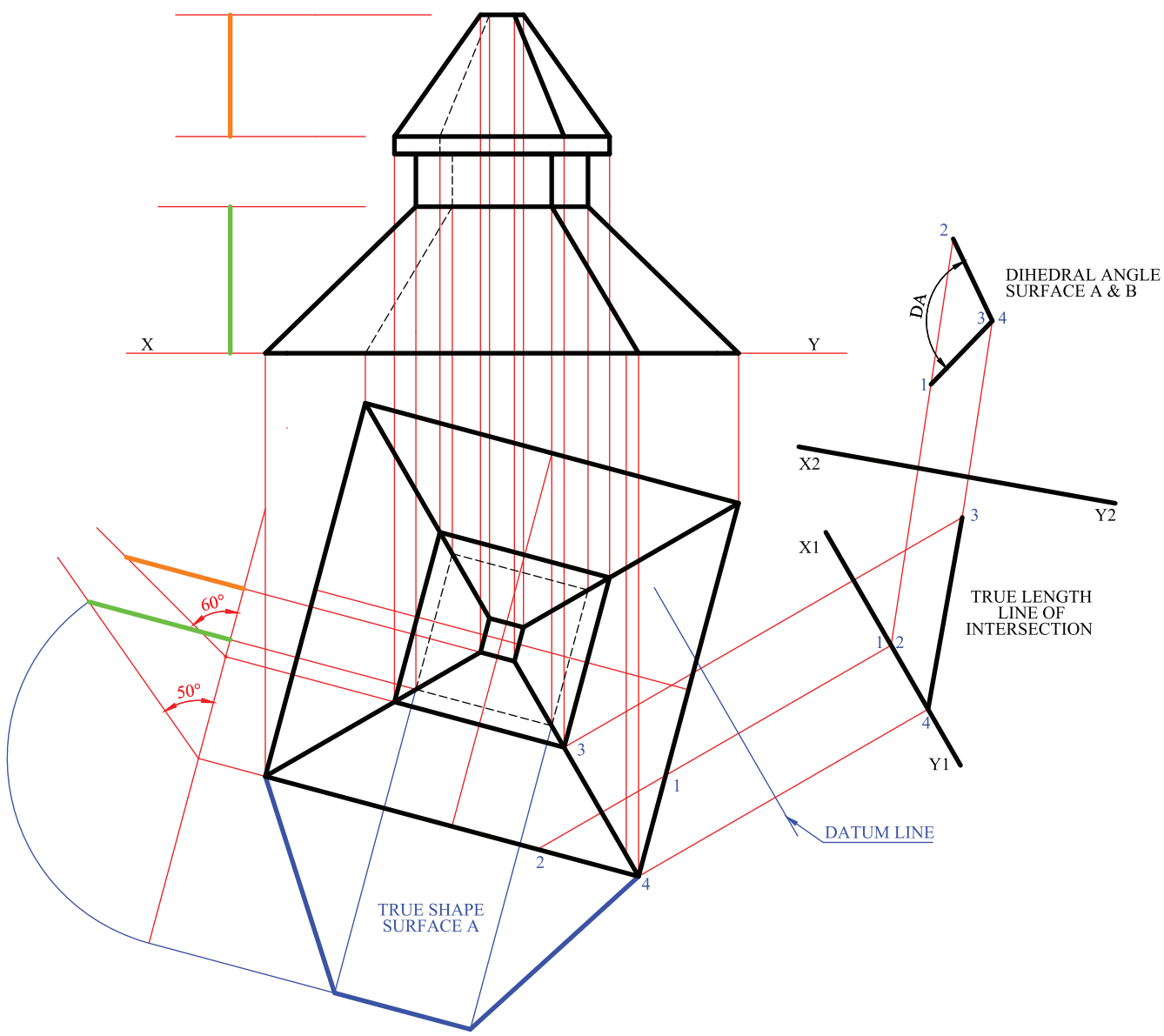




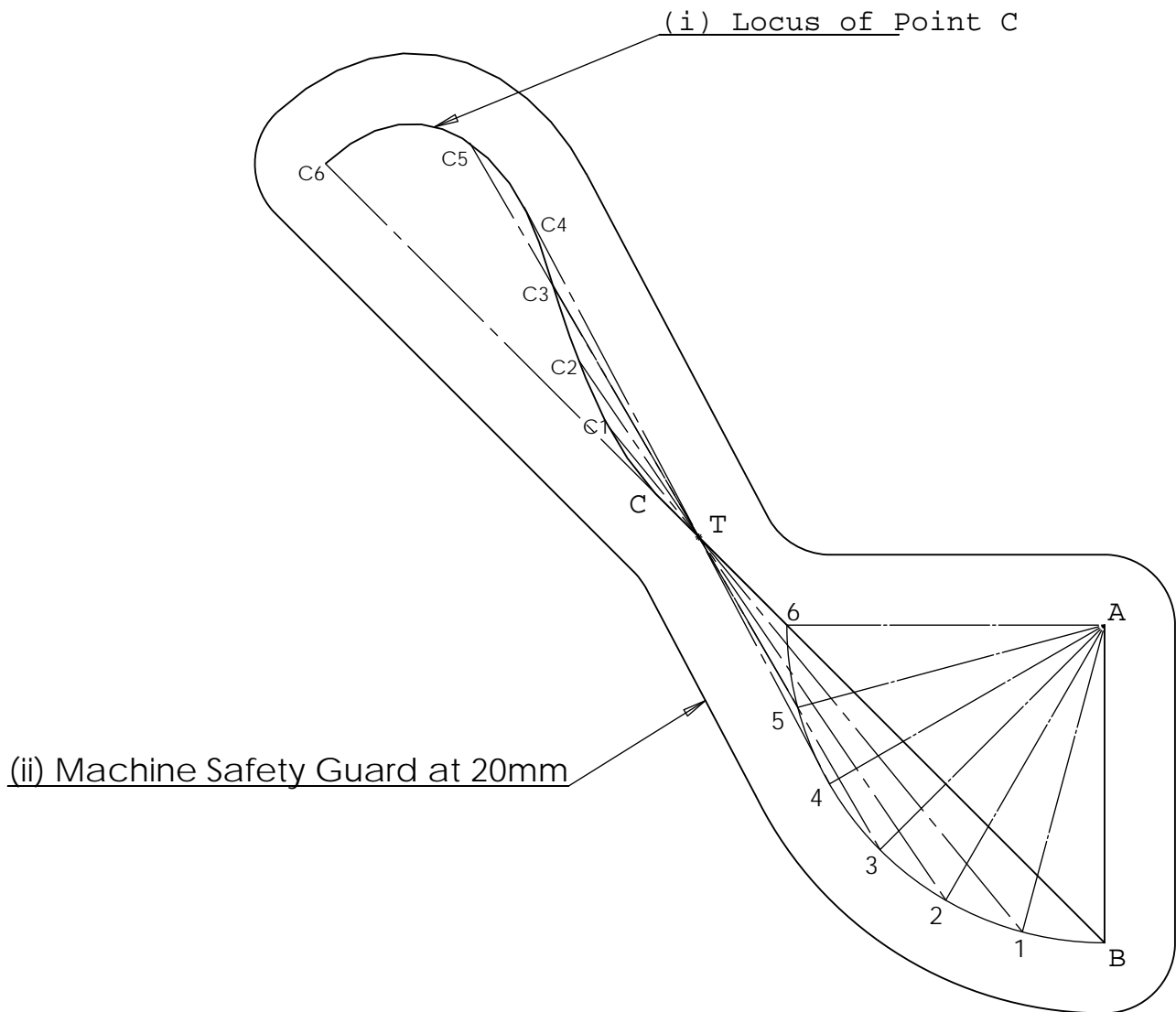
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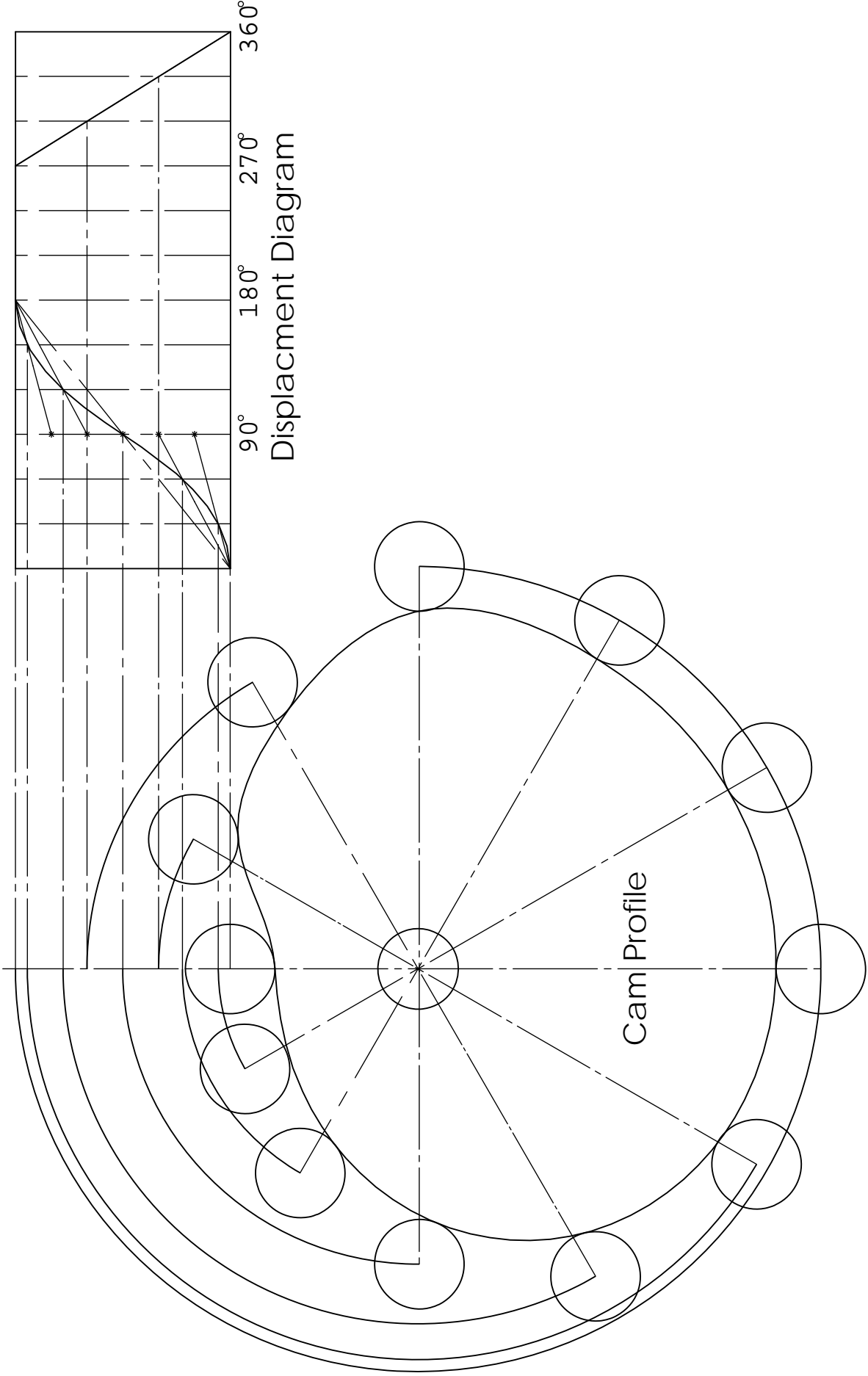
C-3



C-4(a)

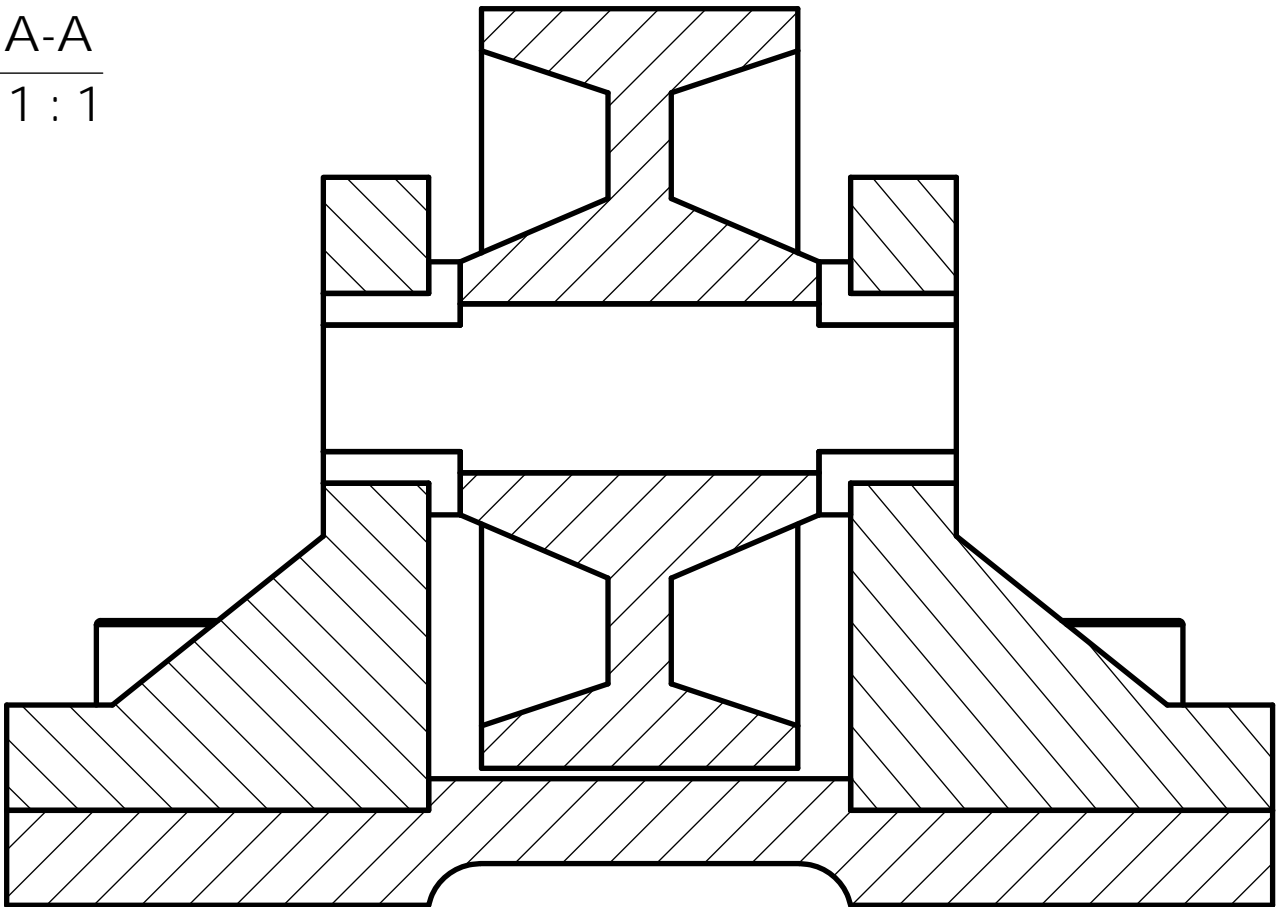


C-4(b)



C-5

A-A
1:1



ORDINARY LEVEL

QUESTION A-1

Elevation	2
Plan	4
End View	12
Presentation	2
Total = 20	

QUESTION A-2

Appropriate method for ellipse	8
Locate points	6
Find focal points	4
Presentation	2
Total = 20	

QUESTION A-3

Determine height in elevation 2x3	6
Container	4
Points of contact 2x2	4
Plan	3
Presentation	3
Total = 20	

QUESTION A-4

Radiate lines to correct vanishing points	6
Projections from plan	5
Complete steps	5
Complete perspective	2
Presentation	2
Total = 20	

QUESTION B-1

(a) Elevation	
Base	6
Body/roof	7
Seat	6
(b) Plan	
Base	6
Body / Roof	6
Seat	6
(c) Auxiliary	
Base	6
Body roof	6
True shape	6
Presentation	5

Total = 60**QUESTION B-2**

(a) Initial set up	8
(b) Elevation	8
Plan	13
(c) Axonometric projection of body	13
Axonometric projection of slots	13
Presentation	5

Total = 60**QUESTION B-3**

(a) Plan	
Pentagon	12
Square	7
(b) Elevation	
Pentagon	10
Square	8
(c) End View	
Outline	10
Lines of Interpenetration	8
Presentation	5

Total = 60

ORDINARY LEVEL

QUESTION C-1

(a)	Set up of heights	7
	Intersection points to correct height	10
	Complete curve	4
(b)	Embankment parallel Lines	15
	Intersections with contours	10
	Complete curve	9
	Presentation	5
Total = 60		

QUESTION C-2

(a)	Plan	
	Outline	10
	Elements	8
(b)	Elevation	
	Outline	10
	Elements	8
(c)	End view	
	Outline	16
	Elements	8
Total = 60		

QUESTION C-3

	Elevation	17
	End view	17
	Surface development	21
	Presentation	5
Total = 60		

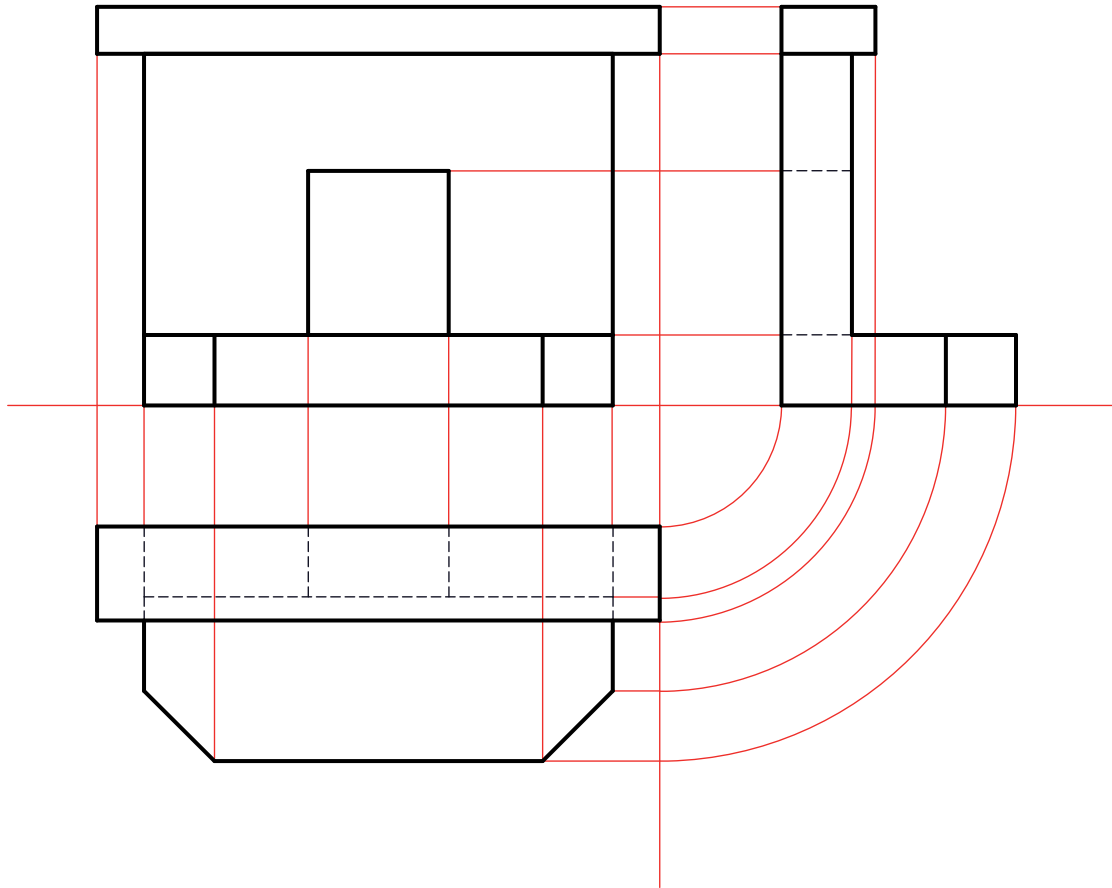
QUESTION C-4

(a)	12 equal divisions	8
	Distance projected	10
	Complete curve	6
	Presentation	4
(b)	6 divisions	12
	Link distances	12
	Find Midpoints	6
	Plot locus	2
Total = 60		

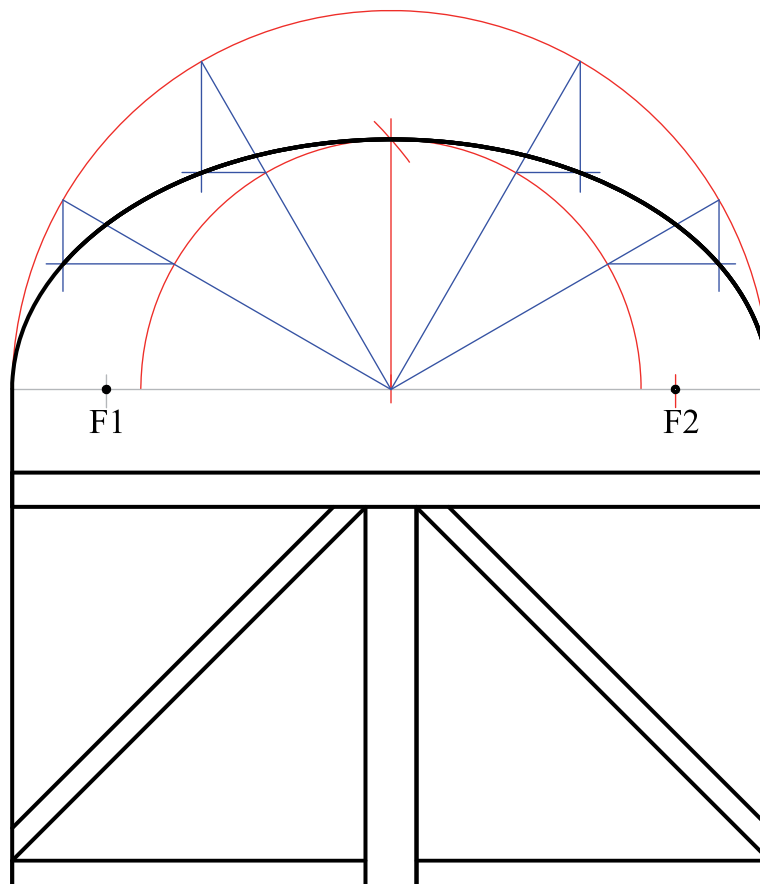
QUESTION C-5

Assembly	
Relative positioning of components	10
Use of elevation	5
Bracket	
Outline	7
Holes	5
Completion	4
Hitch	
Outline	7
Holes	4
Pin	
Hexagon method	5
Draw hexagon	4
Shaft	4
Presentation	5
Total = 60	

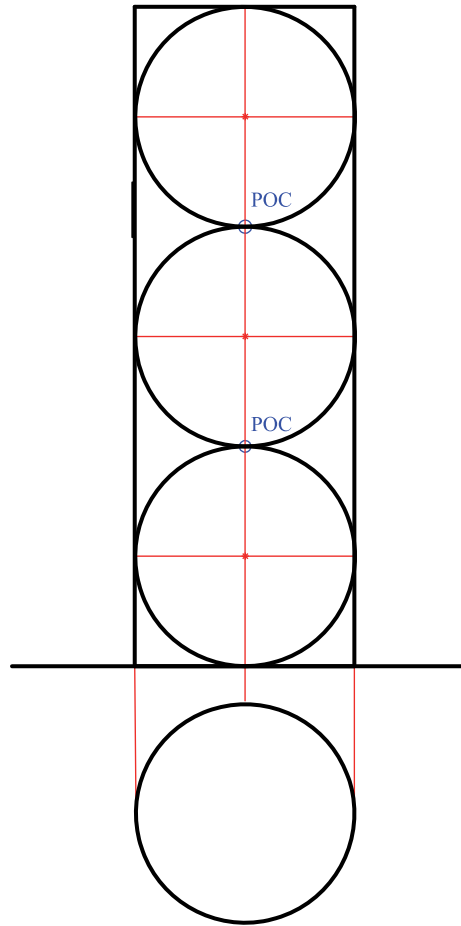
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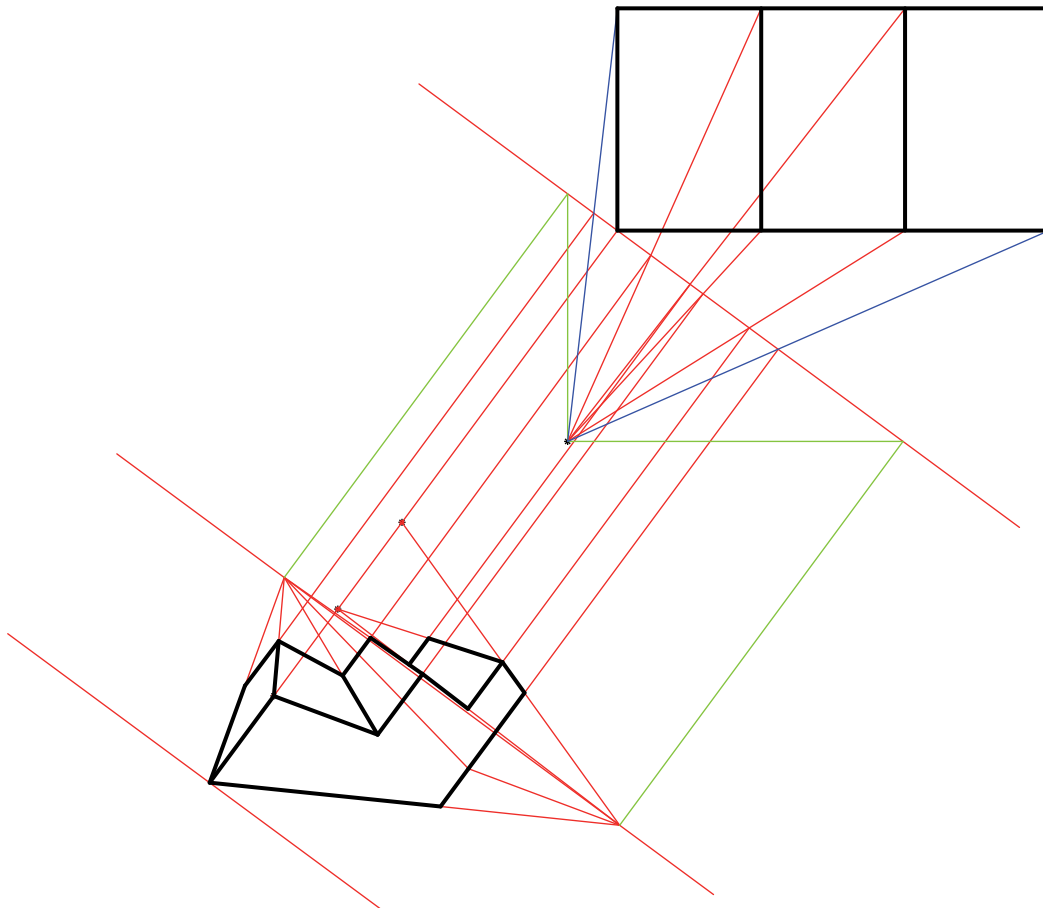
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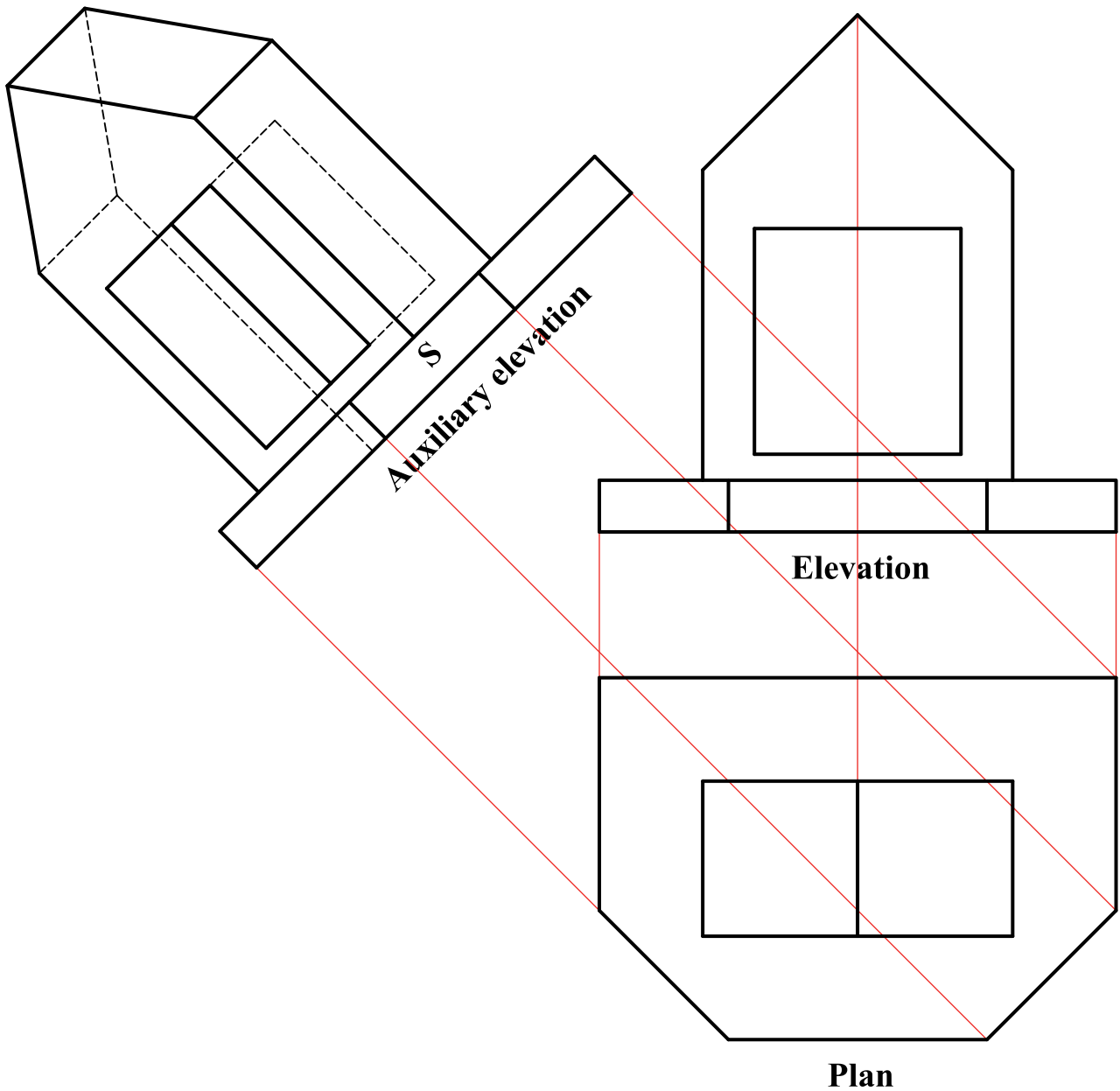
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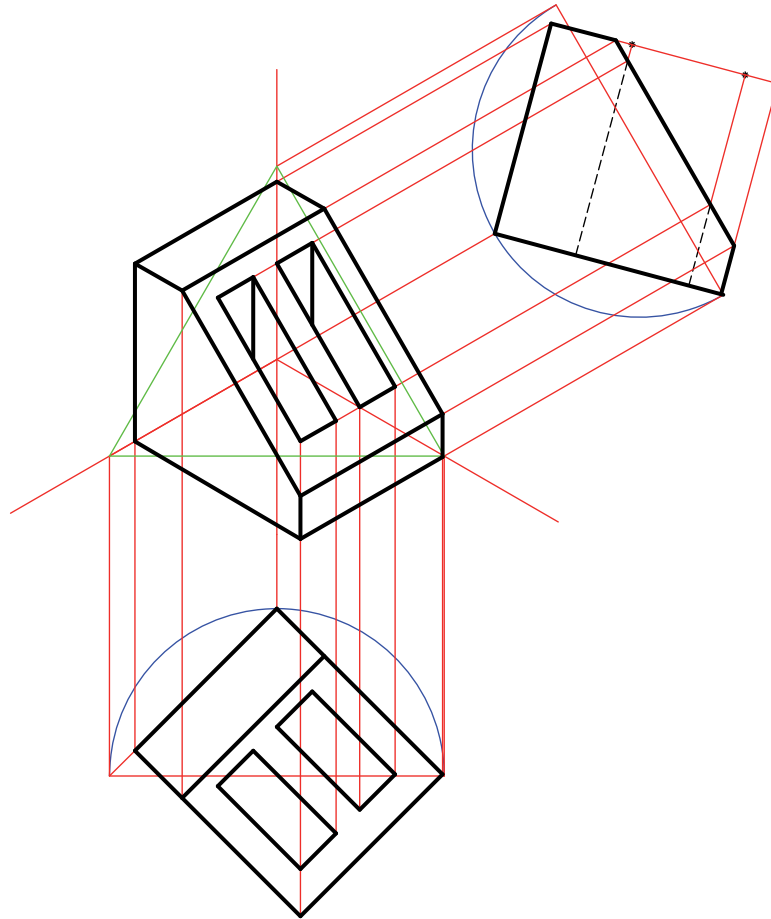
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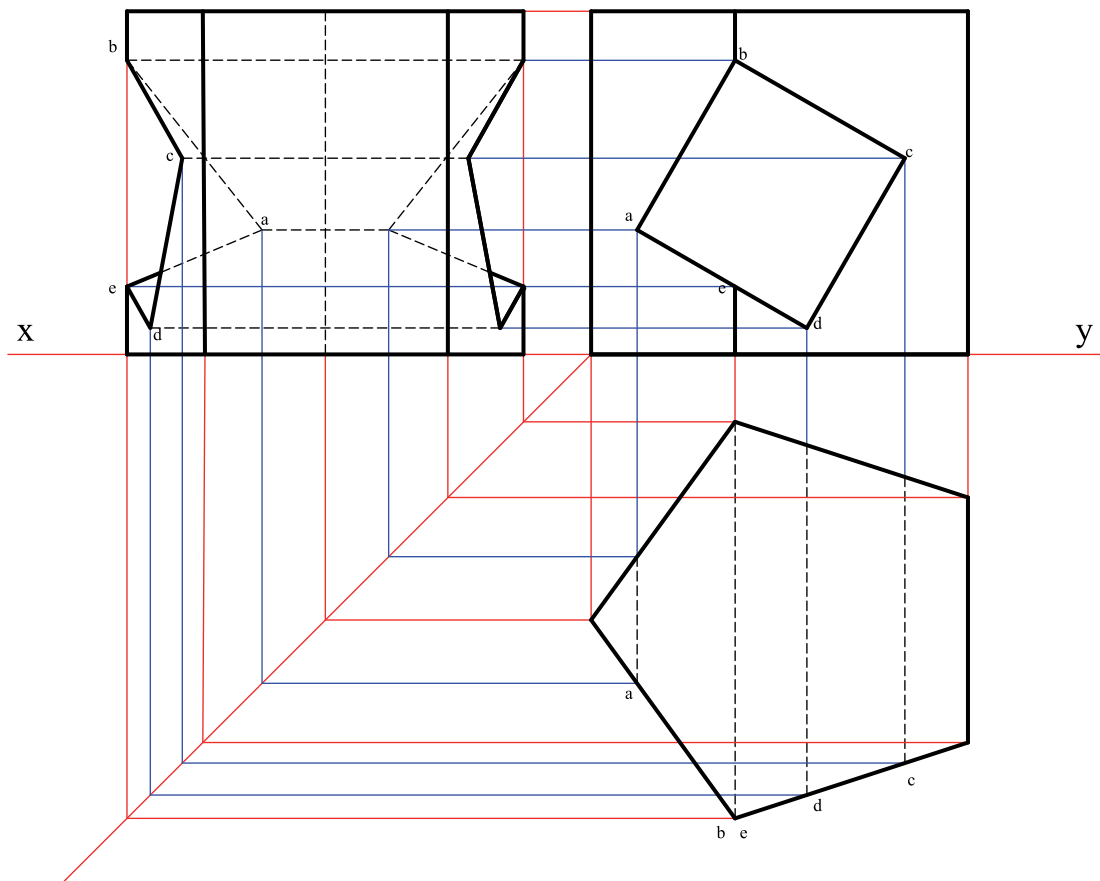
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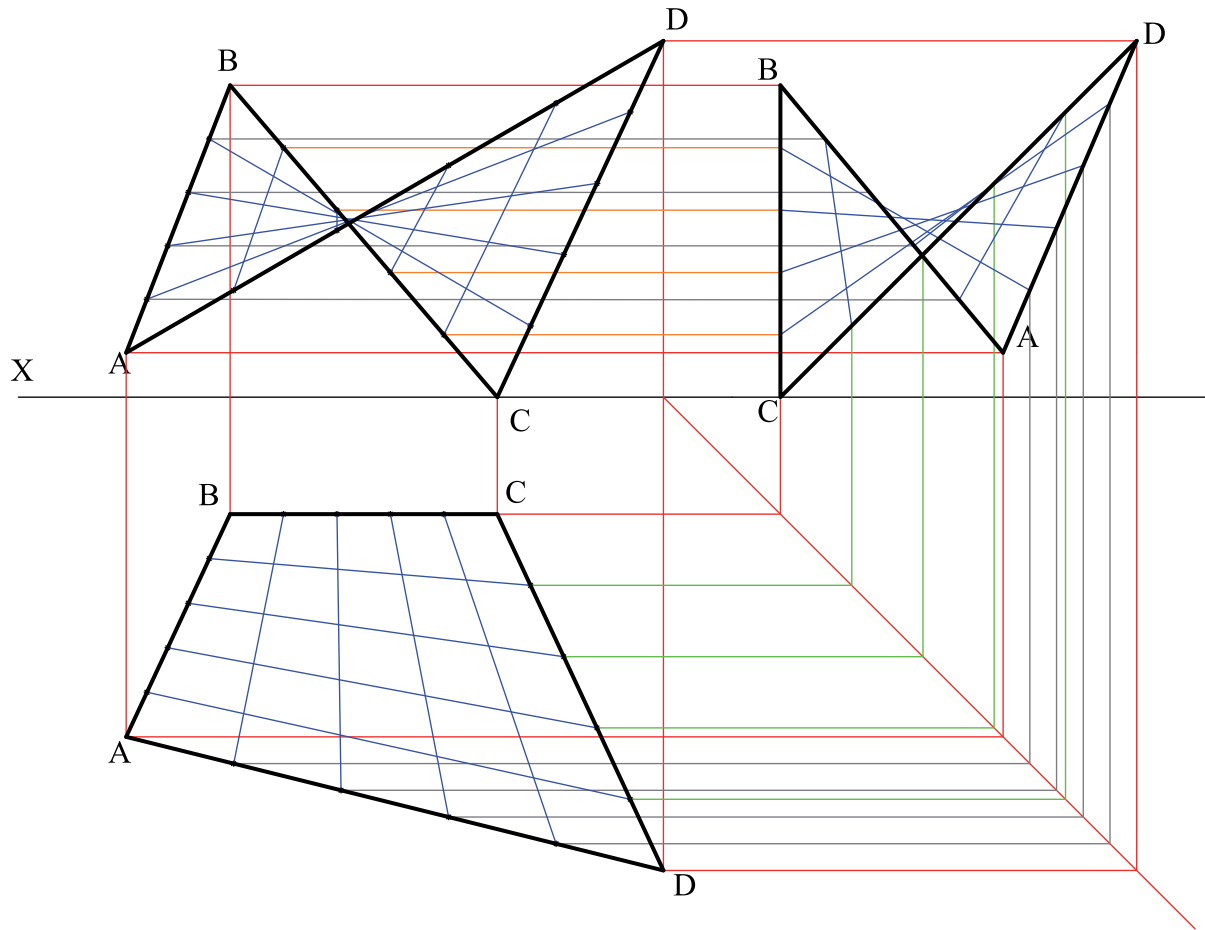
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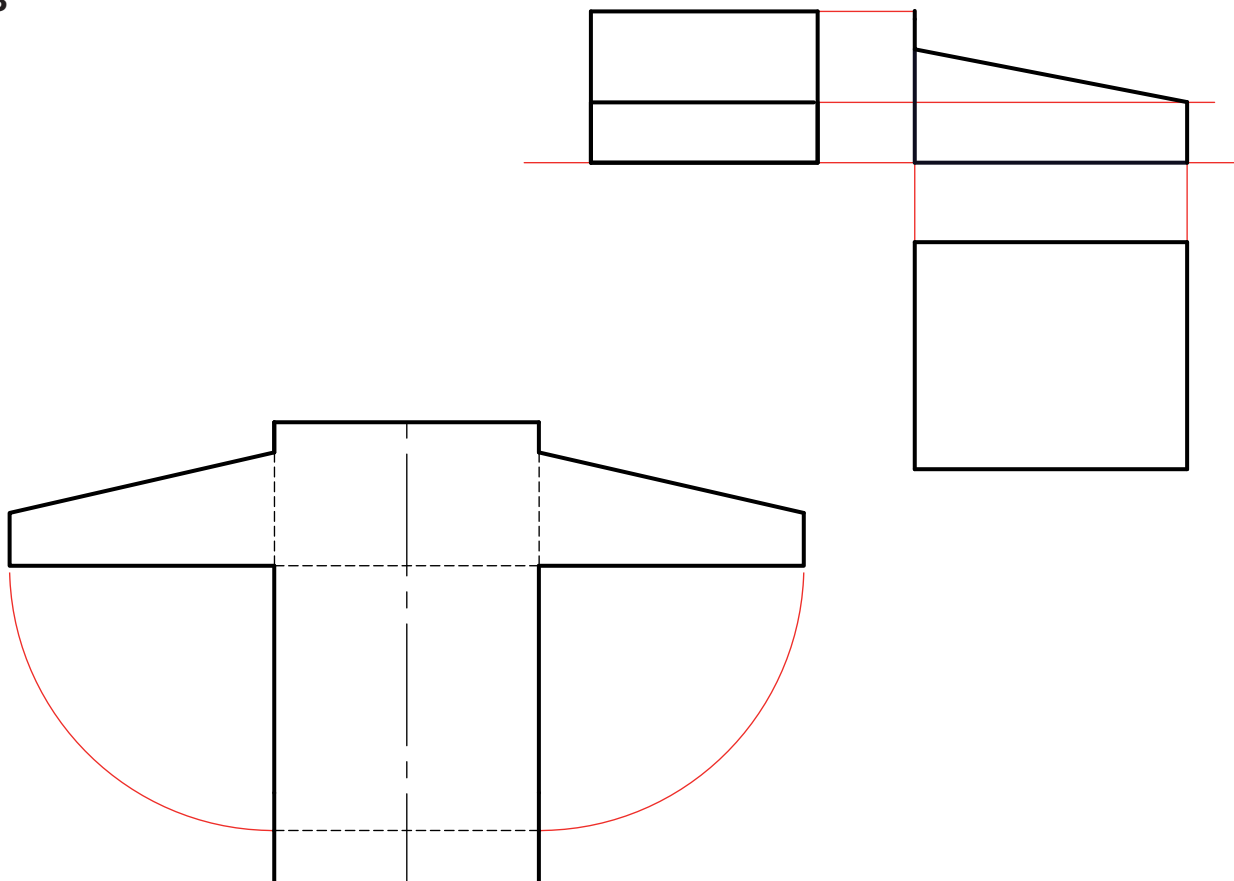
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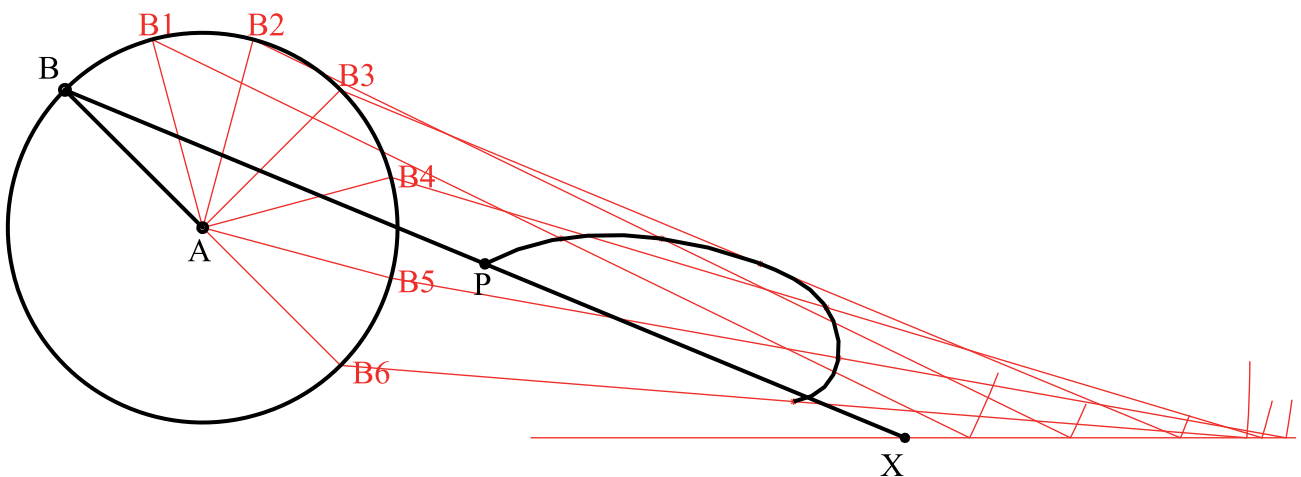
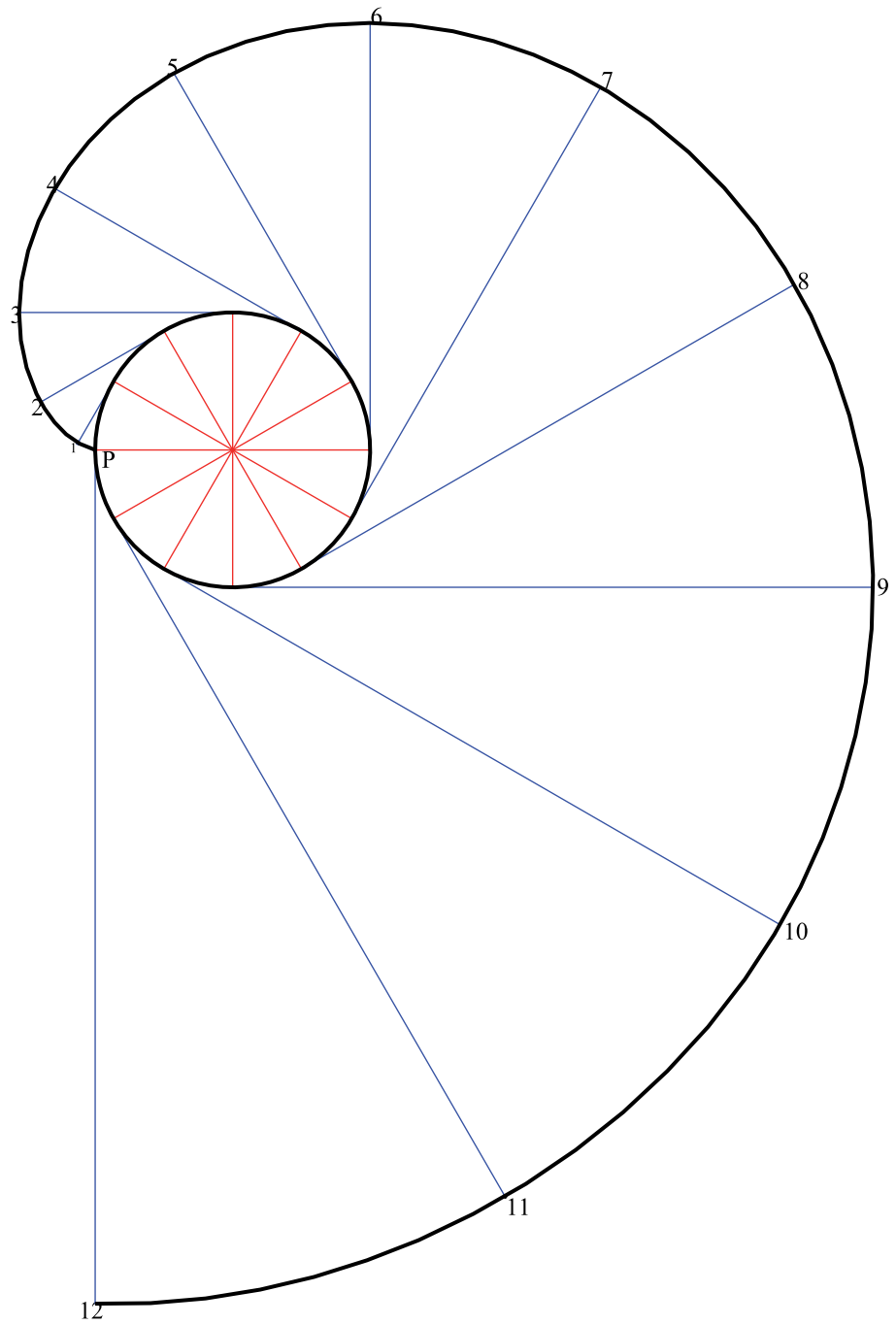
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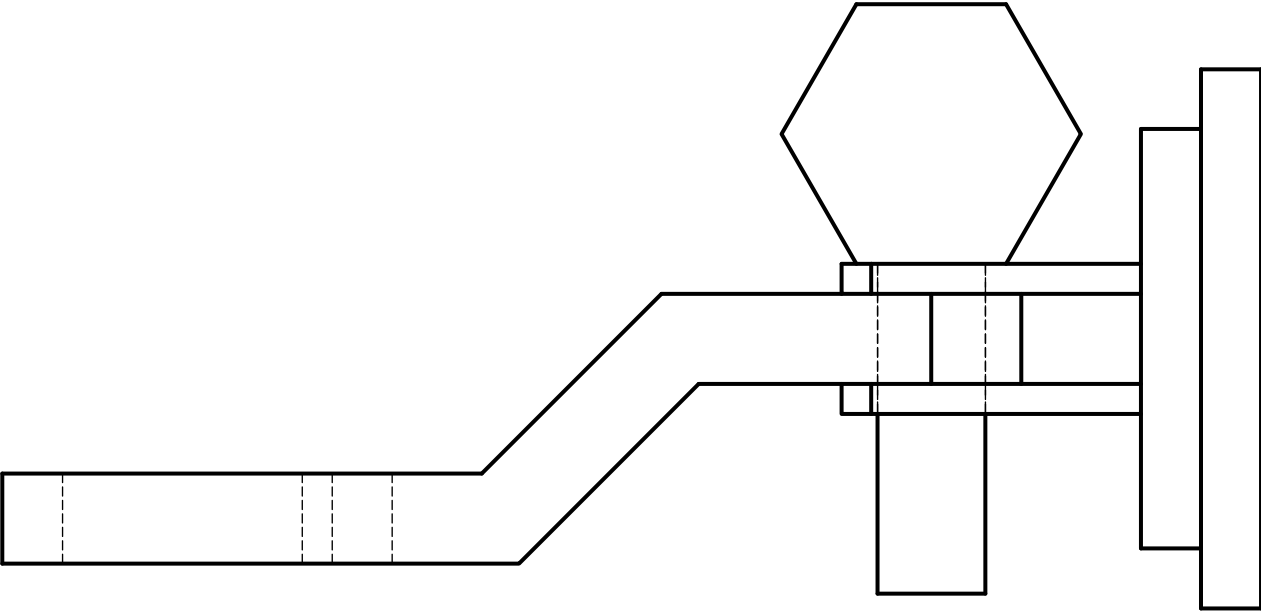
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C-4



C-5





NOTES





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