

# higher education & training

Department:  
Higher Education and Training  
REPUBLIC OF SOUTH AFRICA

## MARKING GUIDELINE

NATIONAL CERTIFICATE

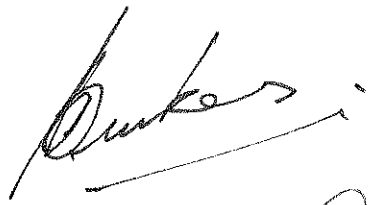

AUGUST EXAMINATION

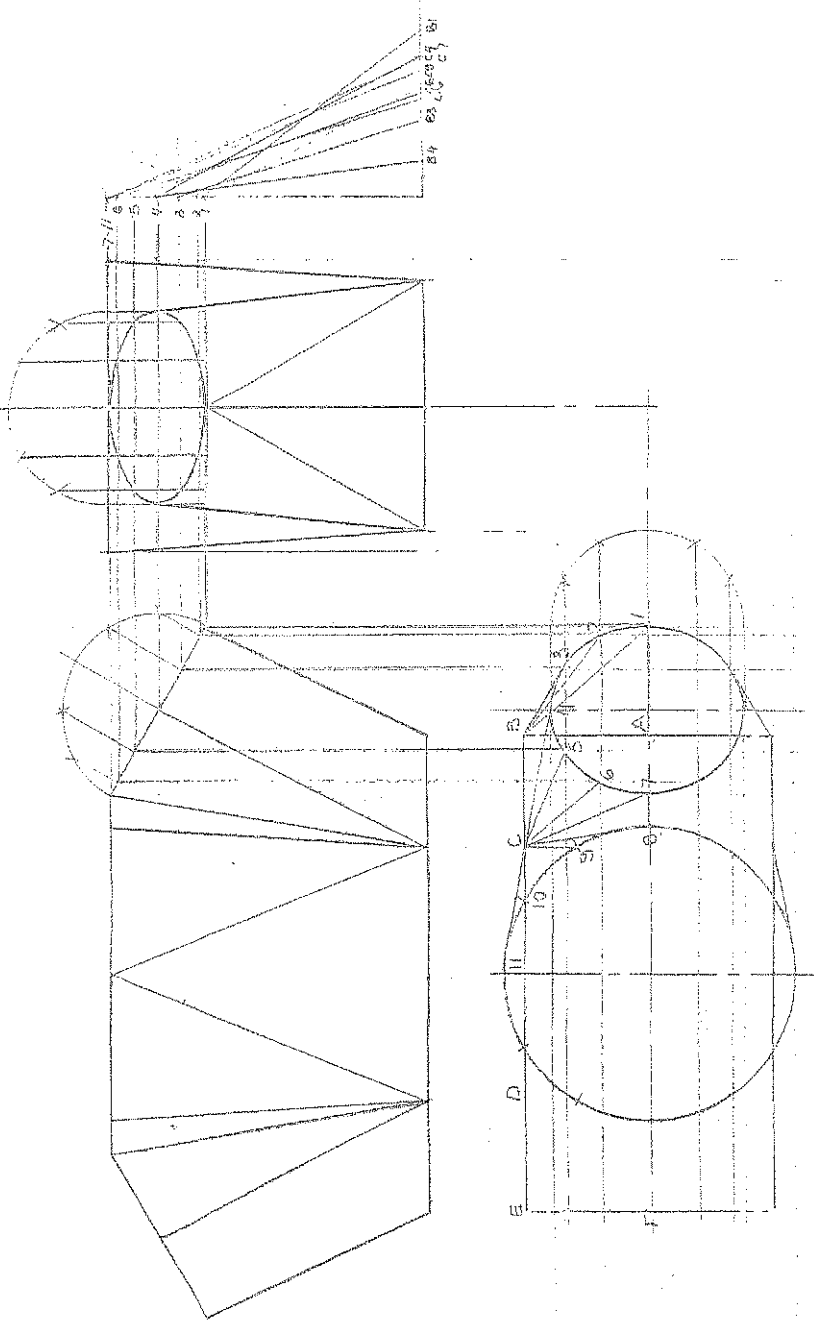
PLATING AND STRUCTURAL STEEL DRAWING N4

5 AUGUST 2014

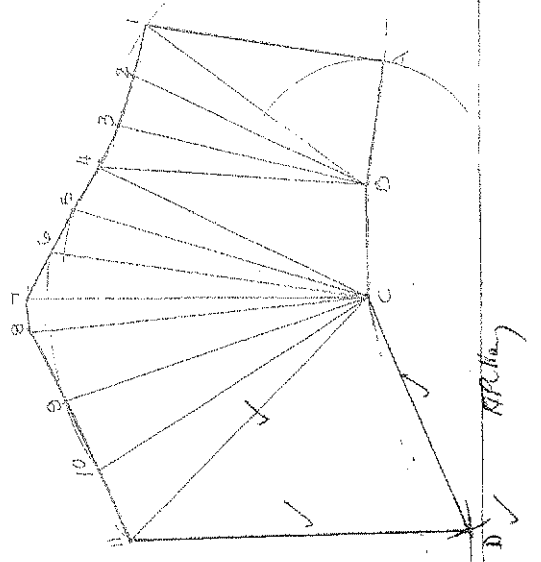
NB: THE MEMORANDUM MUST BE ENLARGED TO A3 FOR MARKING.

This marking guideline consists of <sup>10</sup> 7 pages.

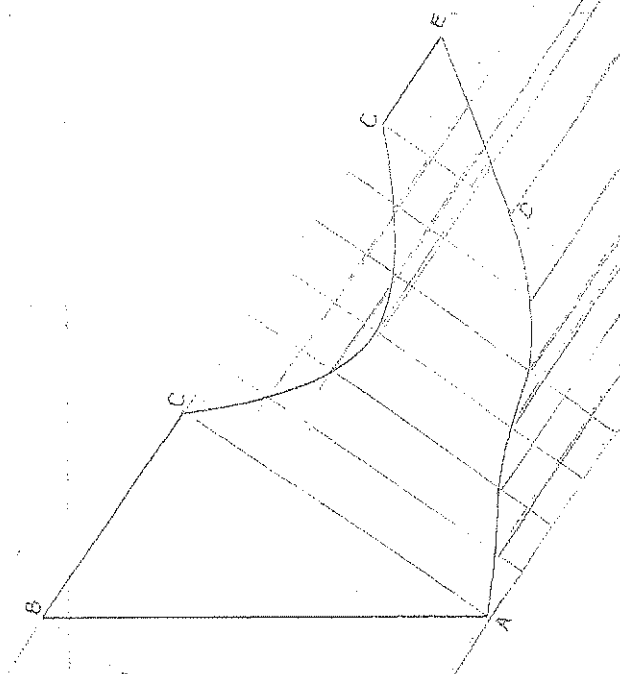
  
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FIGUURI FIGURE  
SCALE 1:2

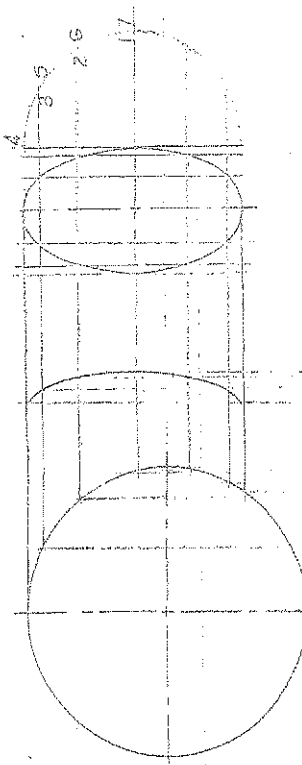
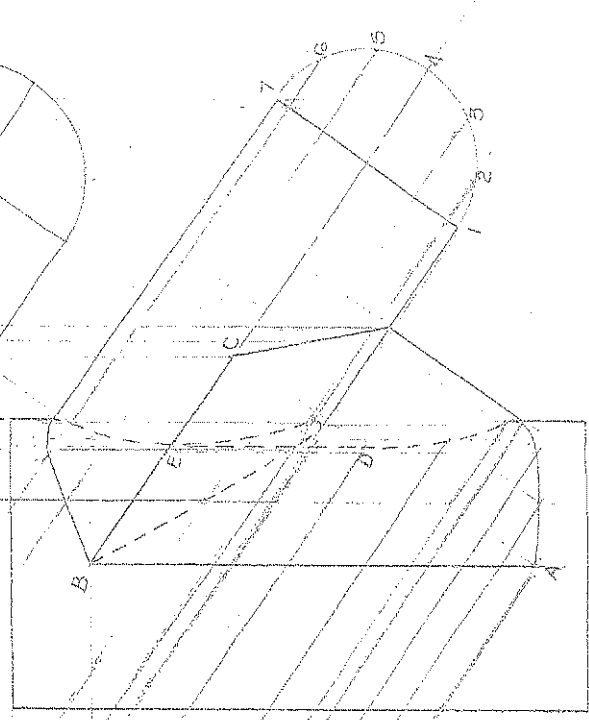
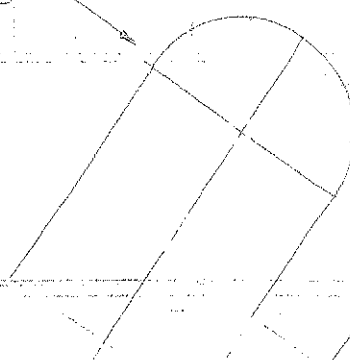


PATTERN FOR GUSSET PIECE



SCALE 1:10

CROSS-SECTION OF GUSSET PIECE



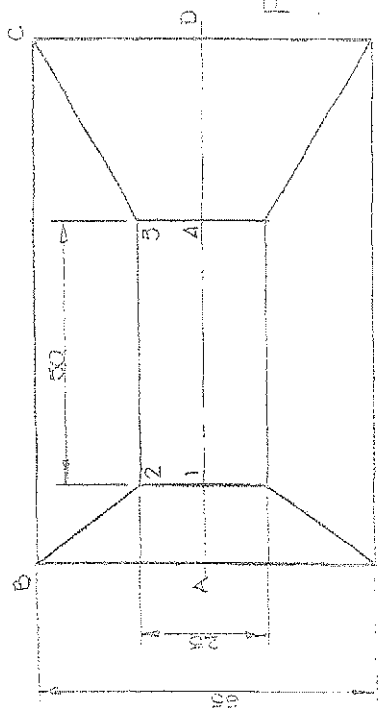
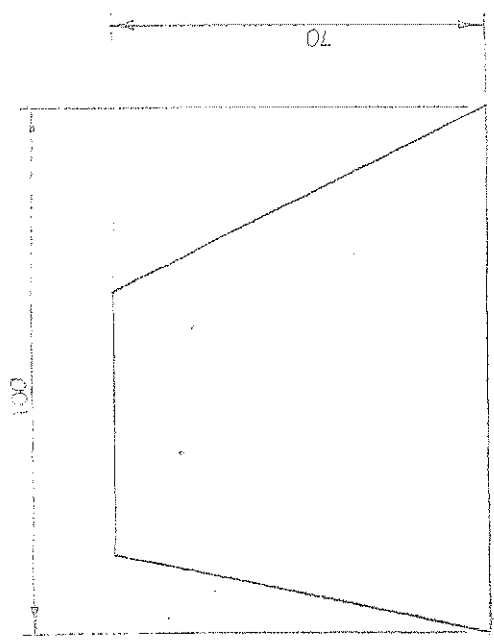
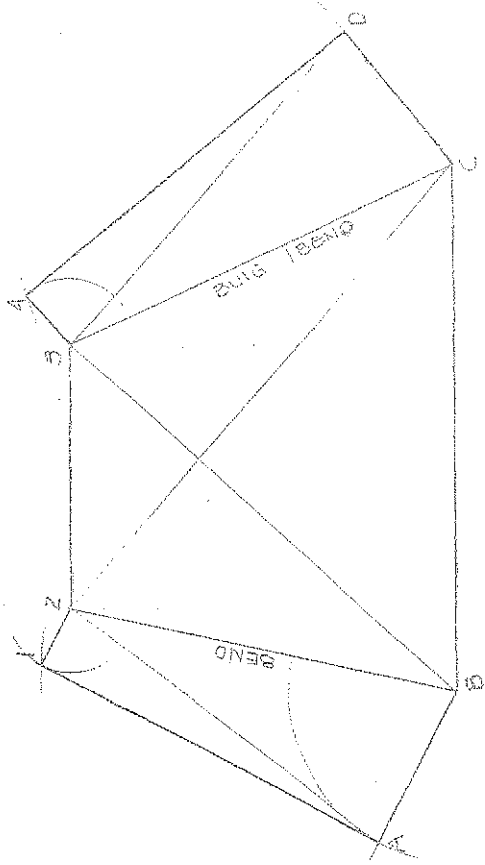


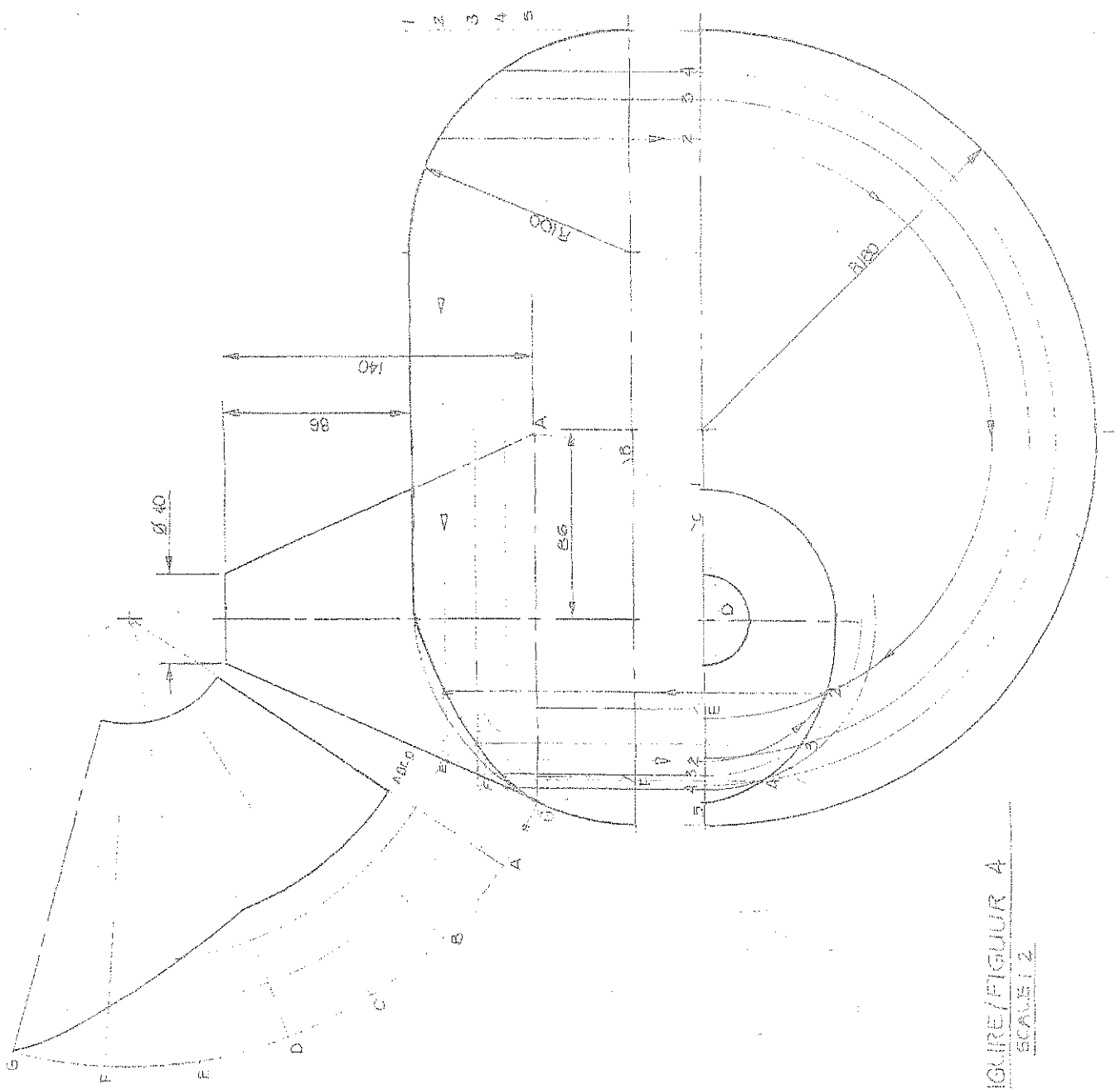
FIGURE 3 FOUR  
SCALE 1:1



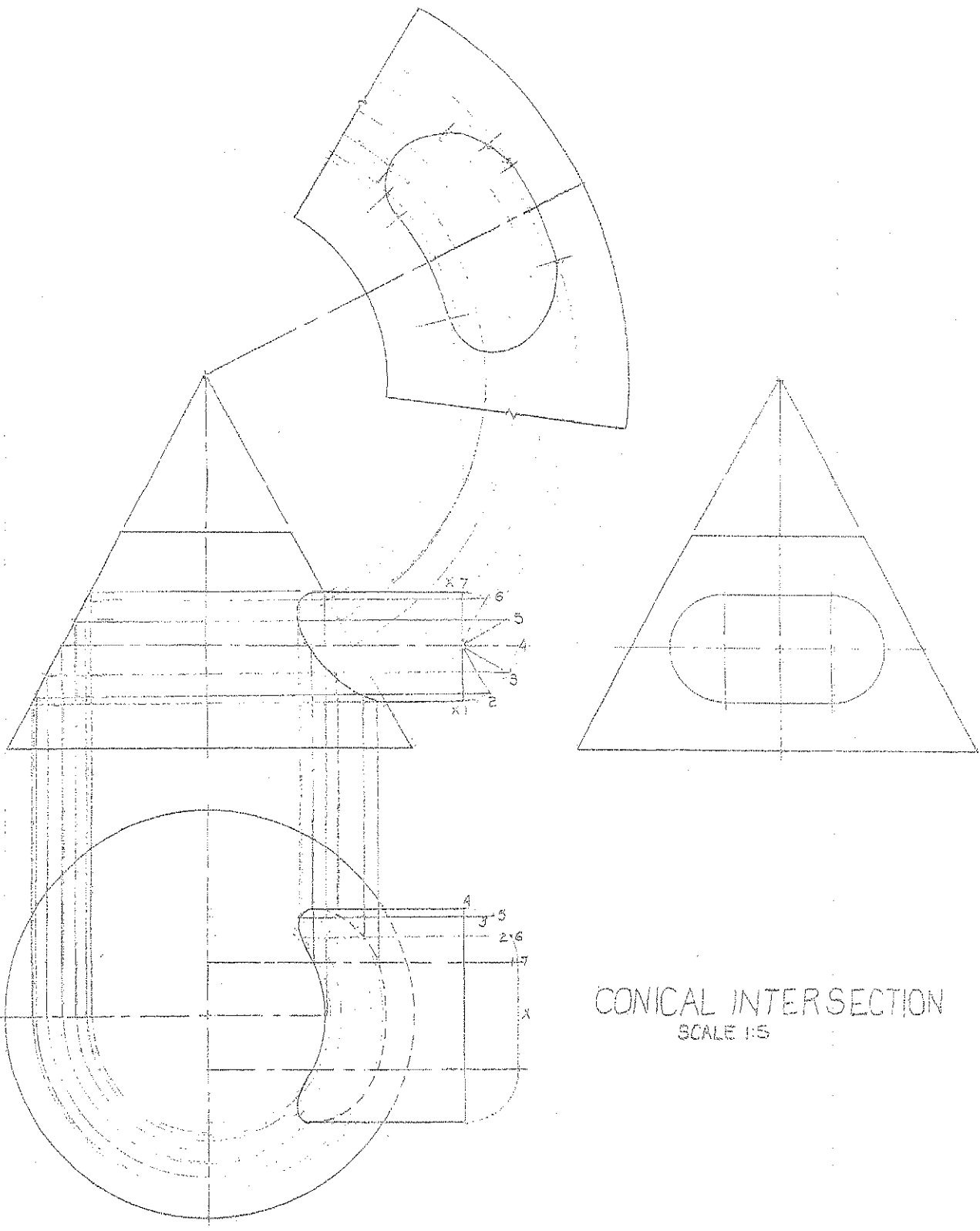
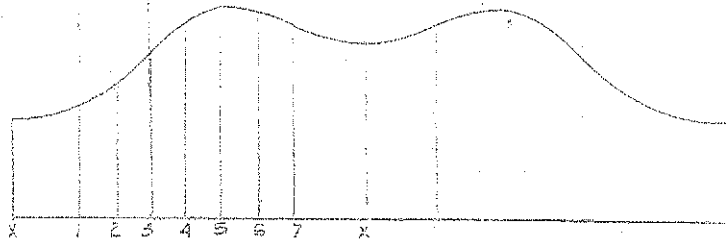
CALCULATION/BEREKENING  
QUESTION 3 VRAAG

$$\begin{aligned}
 A - B &= 65 \div 2 \\
 &= \underline{32,5} \quad \frac{1}{2} \\
 1 - 2 &= 25 \div 2 \\
 5 - 4 &= \underline{12,5} \quad (1) \\
 A1 &= \sqrt{15^2 + 70^2} \quad (1) \quad \times \\
 &= \underline{71,59} \\
 B2 &= \sqrt{15^2 + 20^2 + 70^2} \quad (1) \\
 &= \underline{74,33} \quad (1) \\
 C3 &= \sqrt{35^2 + 20^2 + 70^2} \quad (1) \\
 &= \underline{80,77} \quad (1) \\
 D4 &= \sqrt{35^2 + 70^2} \quad (1) \\
 &= \underline{78,26} \quad (1) \\
 A2 &= \sqrt{12,5^2 + 15^2 + 70^2} \\
 &= \underline{72,67} \quad (1) \\
 B3 &= \sqrt{65^2 + 20^2 + 70^2} \\
 &= \underline{97,596} \quad (1) \\
 D3 &= \sqrt{35^2 + 12,5^2 + 70^2} \\
 &= \underline{79,25} \quad (1)
 \end{aligned}$$

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FIGURE/FIGUR 4  
SCALE 1:2



CONICAL INTERSECTION  
SCALE 1:5

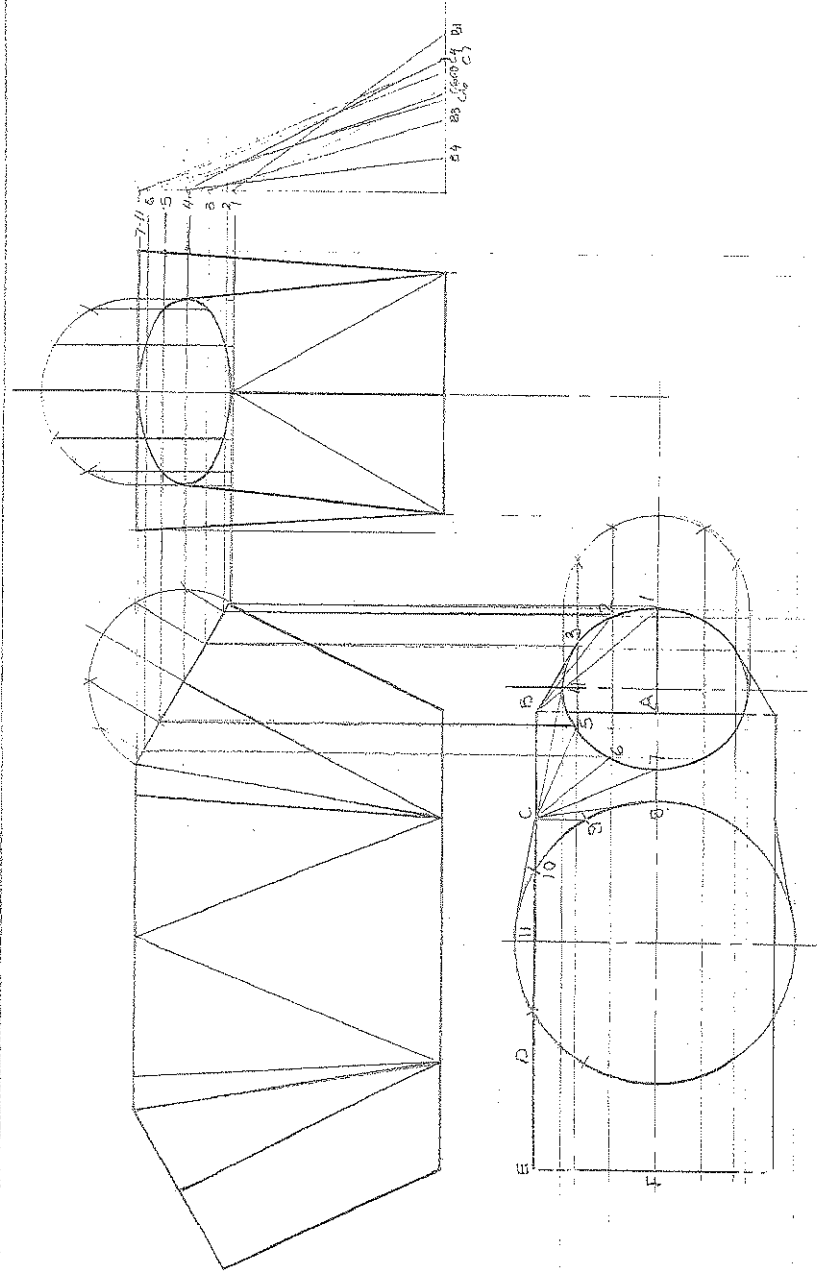
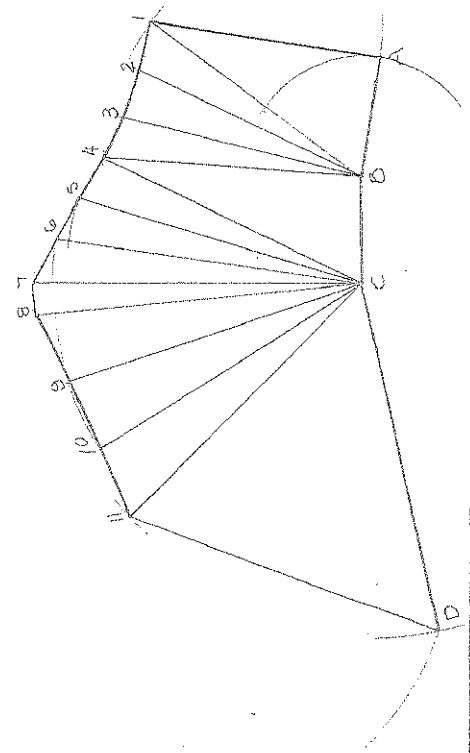
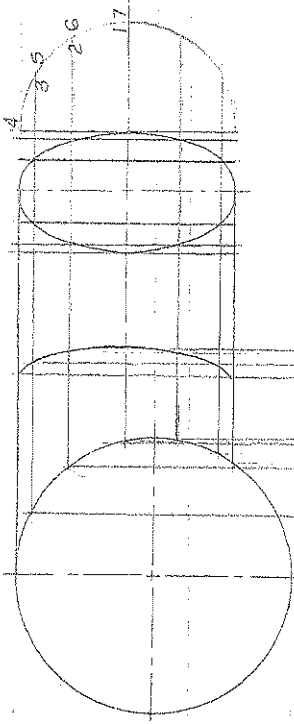


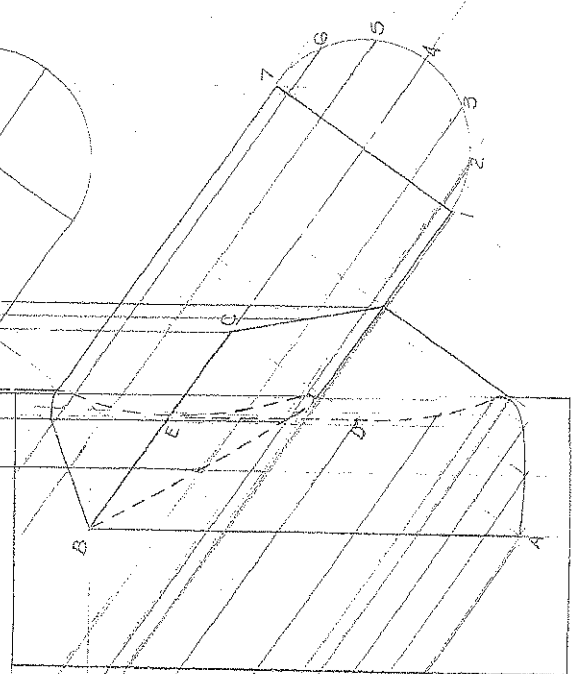
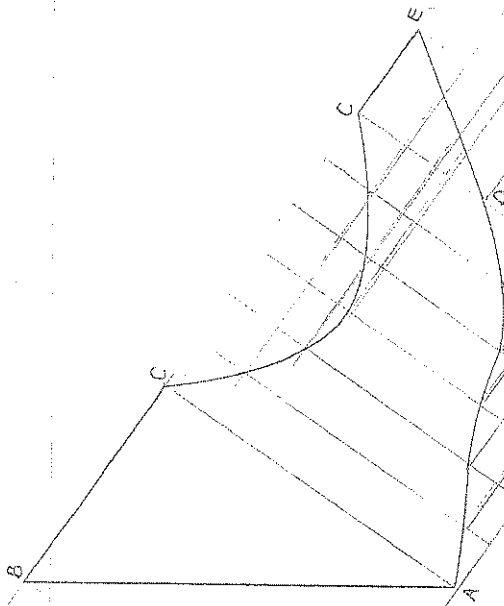
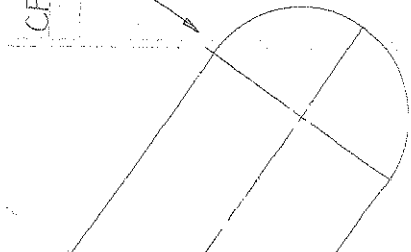
FIGURE 1  
SCALE 1:2



PATTERN FOR GUSSET PIECE

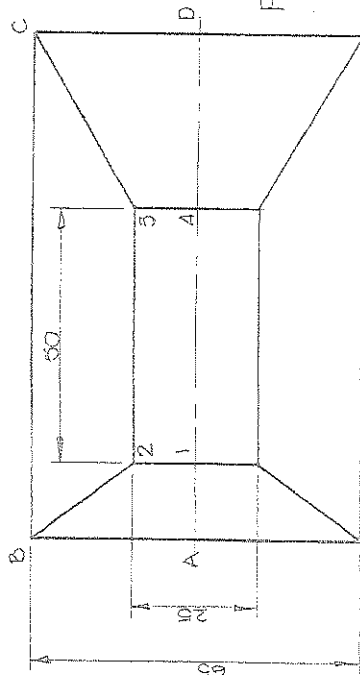
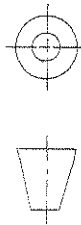
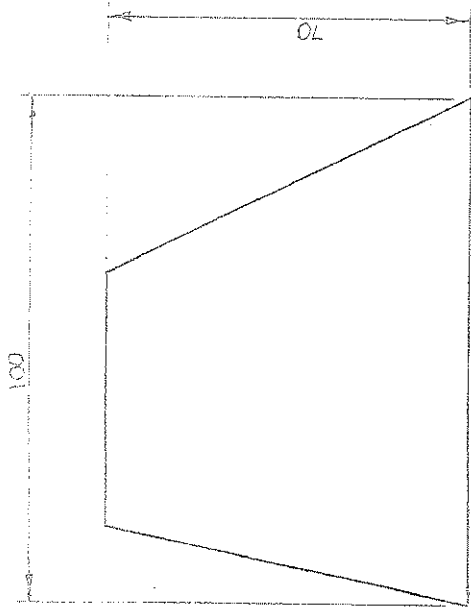


CROSS-SECTION OF GUSSET PIECE

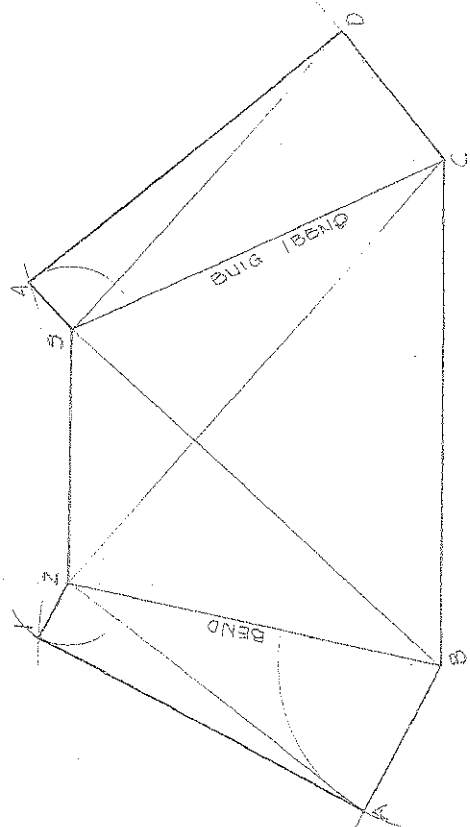


SCALE 1:10



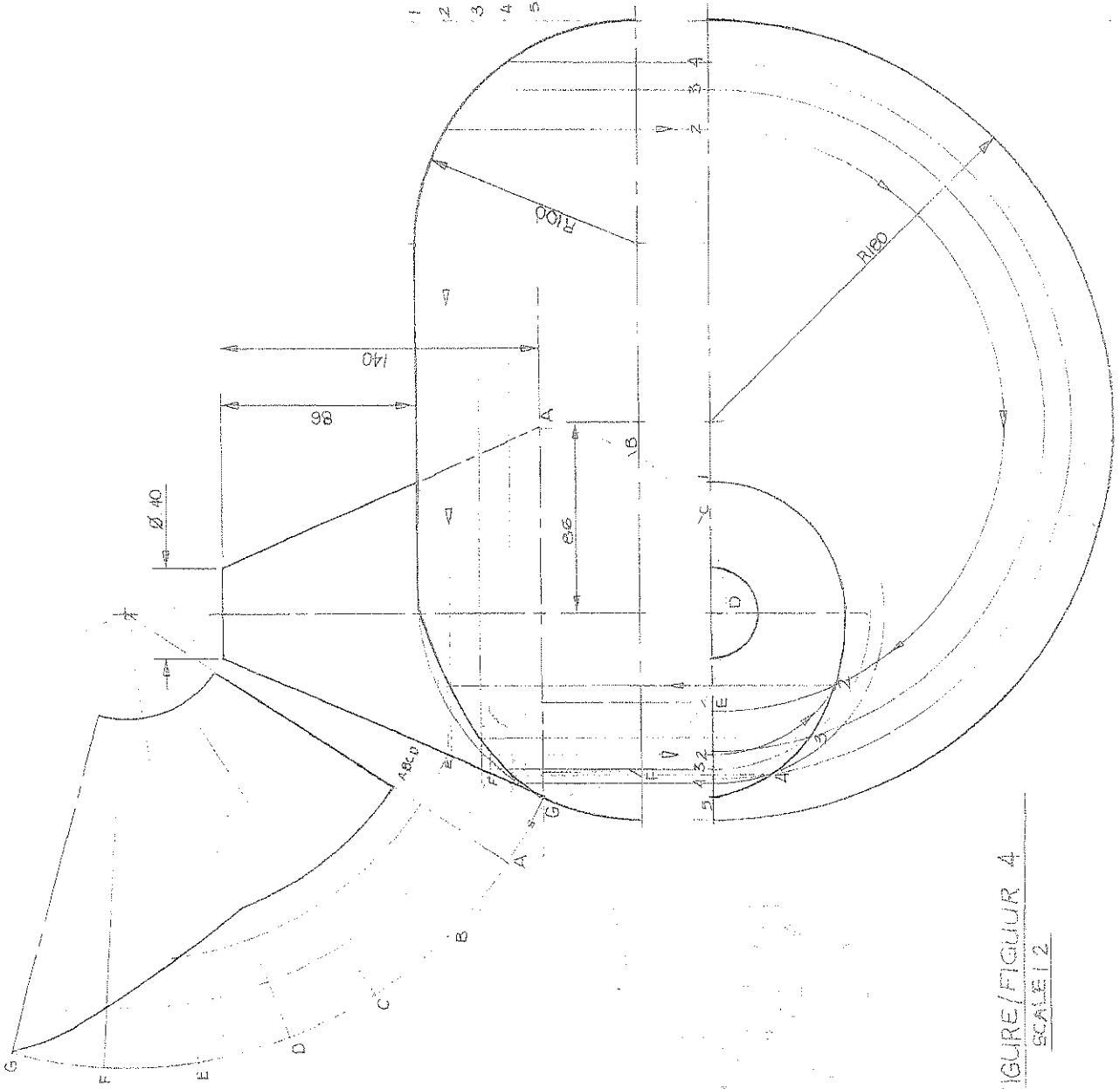


FIGURES FIGUUR  
SCALE 1:1



CALCULATION/BEREKENING  
QUESTION 3 VRAAG

$$\begin{aligned}
 A - B &= 65 \div 2 = \underline{32,5} \quad \frac{1}{2} \\
 1 - 2 &= 25 \div 2 = \underline{12,5} \quad (1) \\
 5 - 4 &= \underline{12,5} \quad (1) \\
 A1 &= \sqrt{15^2 + 70^2} \quad (1) \\
 &= \underline{72,67} \quad (1) \\
 B2 &= \sqrt{15^2 + 20^2 + 70^2} \quad (1) \\
 &= \underline{74,33} \quad (1) \\
 C3 &= \sqrt{35^2 + 20^2 + 70^2} \quad (1) \\
 &= \underline{80,77} \quad (1) \\
 D4 &= \sqrt{35^2 + 70^2} \quad (1) \\
 &= \underline{78,26} \quad (1) \\
 B - C &= \underline{100} \quad \frac{1}{2} \\
 2 - 3 &= \underline{50} \quad (1) \\
 A2 &= \sqrt{12,5^2 + 15^2 + 70^2} \\
 &= \underline{72,67} \quad (1) \\
 B3 &= \sqrt{65^2 + 20^2 + 70^2} \\
 &= \underline{97,596} \quad (1) \\
 D3 &= \sqrt{35^2 + 12,5^2 + 70^2} \\
 &= \underline{79,25} \quad (1)
 \end{aligned}$$



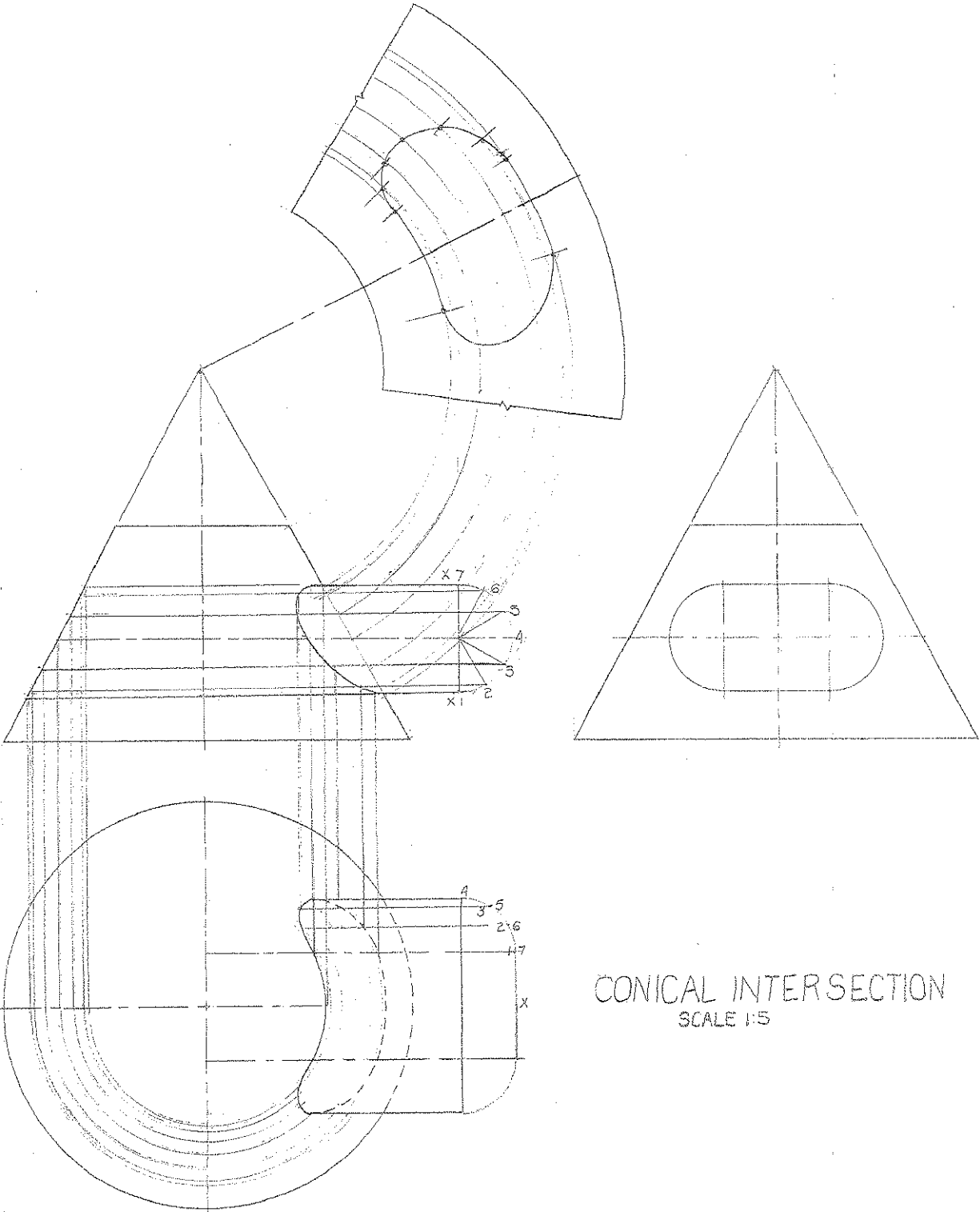
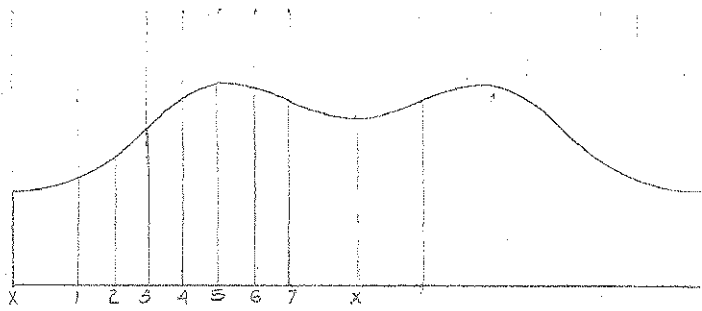
FIGURE/FIGUR 4  
SCALE 1/2

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P55DN4

Q4

A14



CONICAL INTERSECTION  
SCALE 1/5