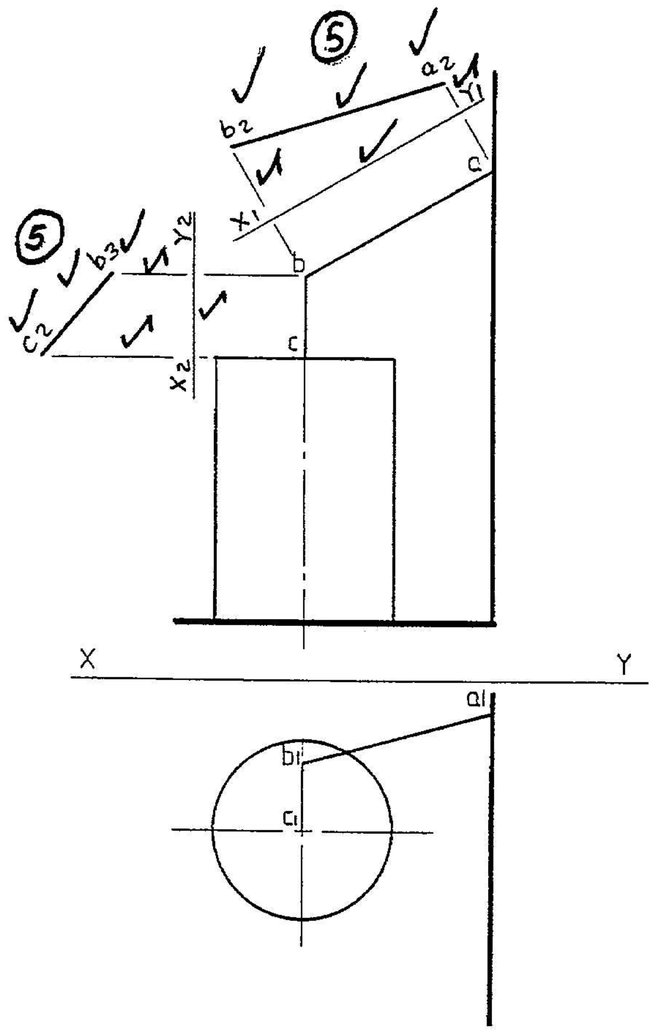
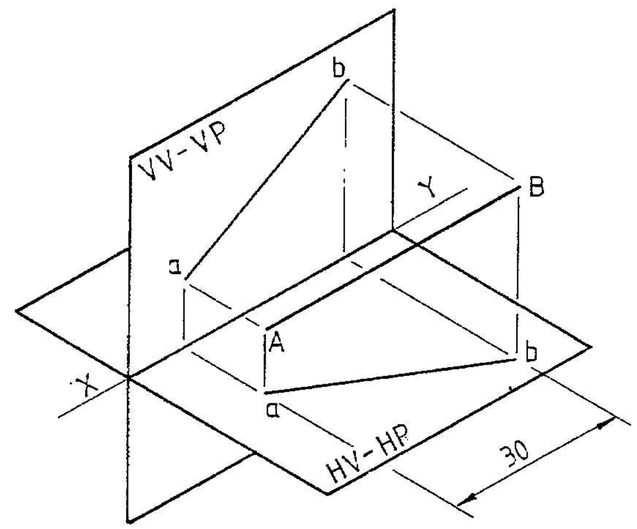
$\sqrt{} = \frac{1}{2}$



38 + 19 = 57mm (2)

FIG. 1.1

[12]



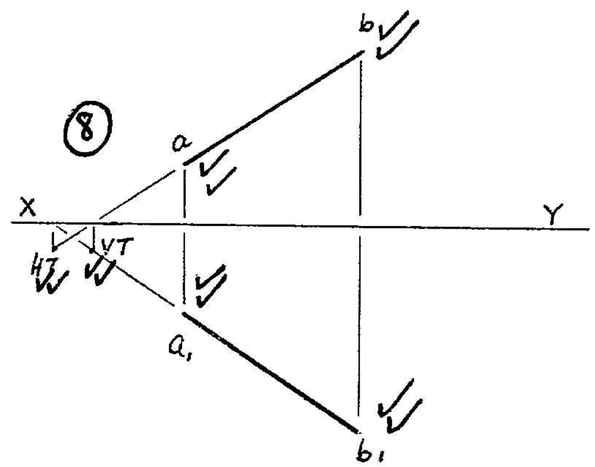


FIG. 1.2

[12]

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Vraag 1

Figuur 1.1 toon die vooraansig en boaansig van 'n geutbak asook die afvoerpyp ABC. Bepaal die ware lengte van die afvoerpyp ABC.	12	
Figuur 1.2 toon die isometriese aansig van lynstuk AB in die ruimte. Punt A is 10 mm bo die horisontale vlak en 15 mm voor die vertikale vlak. Punt B is 30 mm bo die horisontale vlak en 35 mm voor die vertikale vlak. Deur gebruik te maak van die gegewe X-Y grondlyn, bepaal 1.2.1 die vooraansig van die lynstuk 1.2.2 die boaansig van die lynstuk 1.2.3 die snyspore VS en HS	 4 4 4	
Lynwerk en netheid	2	
Totaal	**26**	

Question 1

Figure 1.1 shows the front view and top view of a gutter bin as well as a feeding pipe ABC. Determine the true length of the feeding pipe ABC.	12	
Figure 1.2 shows the isometric view of line segment AB in space. Point A is 10 mm above the horizontal plane and 15 mm in front of the vertical plane. Point B is 30 mm above the horizontal plane and 35 mm in front of the vertical plane. By making use of the given X-Y line determine 1.2.1 the front view of the line segment. 1.2.2 the top view of the line segment. 1.2.3 the traces VT and HT.	 4 4 4	
Linework and neatness	2	
Total	**26**	

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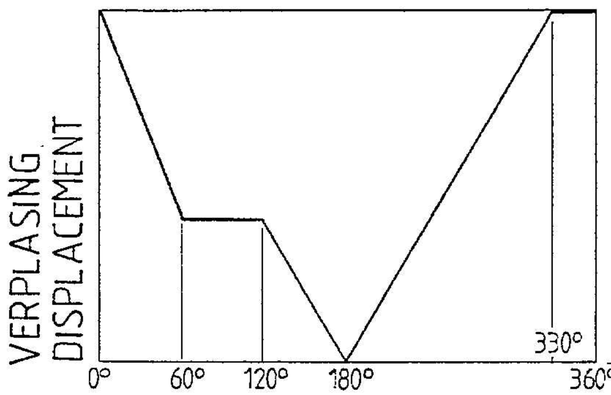
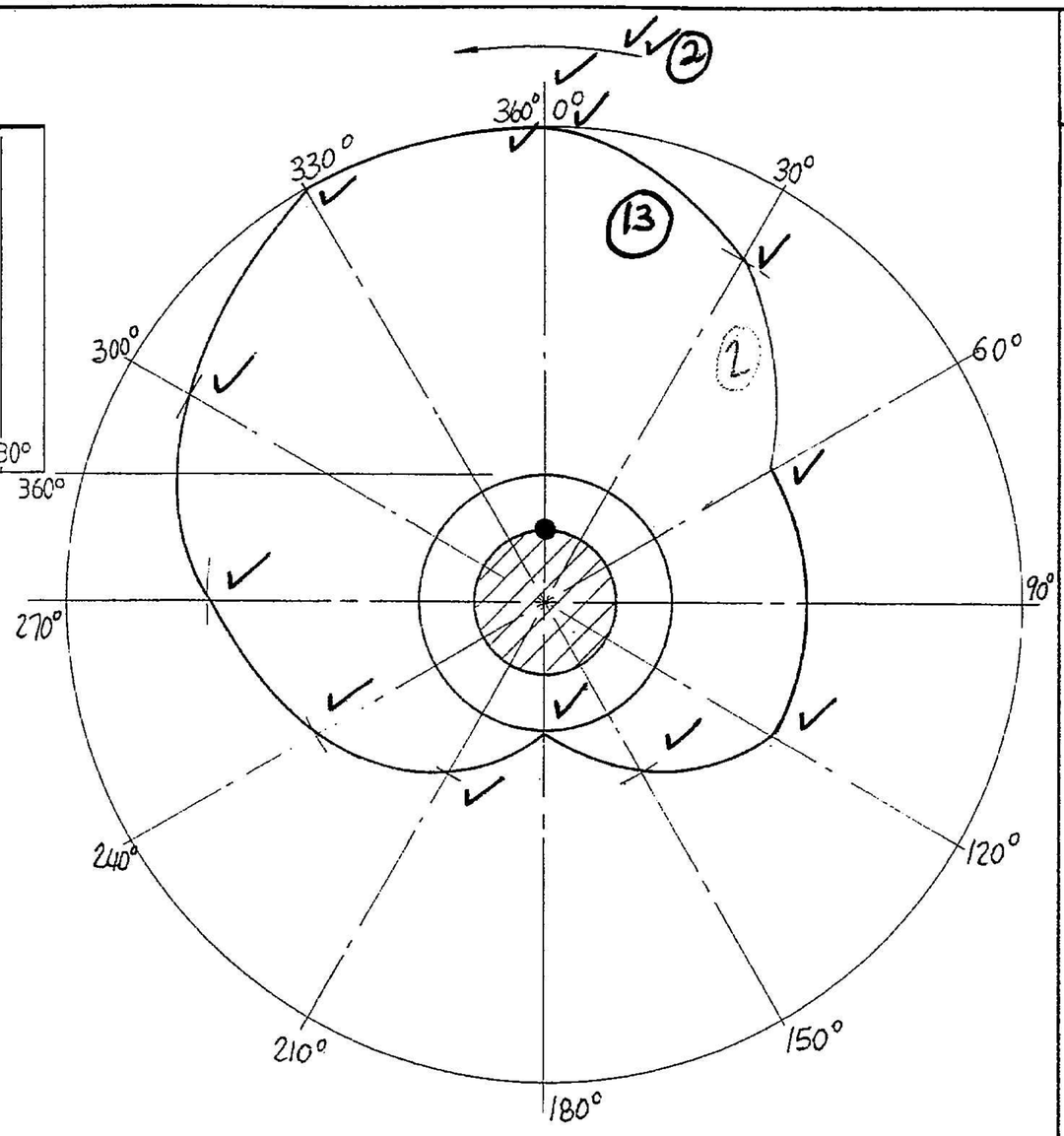
VRAAG 1
QUESTION

VERPLASINGSDIAGRAM
DISPLACEMENT DIAGRAM



ROTASIE / ROTATION



2.1 36 mm (2)
2.2 0° (2)

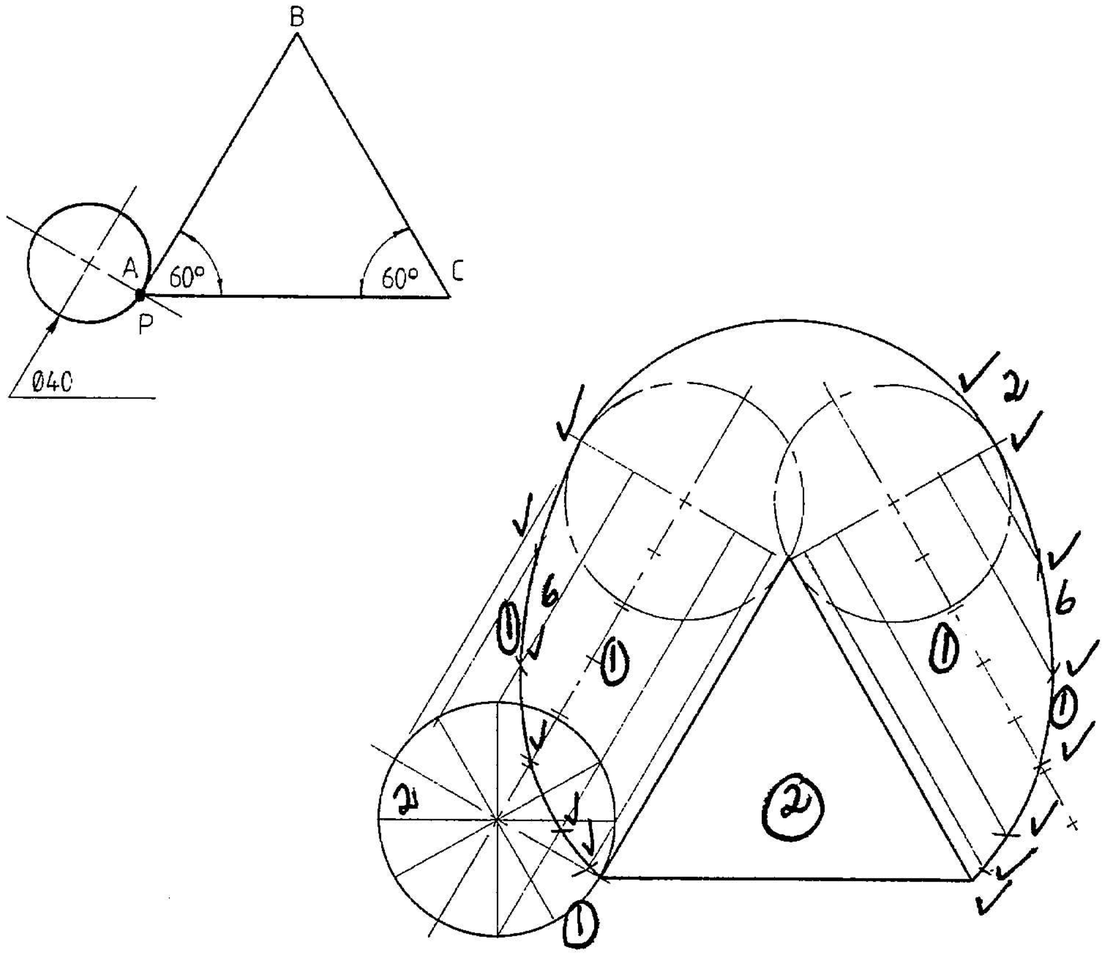
FIG. 2

Vraag 2

Figuur 2 toon die verplasingsdiagram asook die minimum nokradius en die nokas van 'n wigvormige nokvolger. Die nok roteer anti-kloksgewys.		
Teken die nokprofiel.	17	
Bepaal:		
2.1 Die verplasing na 60° van rotasie	2	
2.2 Die verplasing na 330° van rotasie	2	
Lynwerk en netheid	2	
Totaal	**23**	

Question 2

Figure 2 shows the displacement diagram as well the minimum cam radius and camshaft of a wedge-shaped cam follower. The cam rotates anti-clockwise.		
Draw the camprofile.	17	
Determine:		
2.1 The displacement after 60° of rotation	2	
2.2 The displacement after 330° of rotation	2	
Linework and neatness	2	
Total	**23**	



$\pi D = \pi 40$ ✓
$= 125,7$ ✓ [4]
½ REV $= 125,7 \div 2$ ✓
$= 62,85$ ✓

FIG. 3

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Vraag 3

Figuur 3 toon 'n skyf asook die baan waarop dit rol. 3.1 Teken die gegewe figuur, volgens 'n skaal van 1:1. Begin by sy AC. 3.2 Konstrueer die lokus van punt P as die skyf vanaf A tot B vir 'n halwe omwenteling rol, en daarna tot by C vir 'n verdere halwe omwenteling. (Toon alle berekenings).	7 20	
Lynwerk en netheid	3	
Totaal	**30**	

Question 3

Figure 3 shows a disc as well as the contour on which it rolls. 3.1 Redraw the given figure to a scale 1:1. Start at side AC. 3.2 Construct the locus of point P if the disc rolls from point A to B for half a revolution and then to point C for a further half a revolution. (Show all calculations).	7 20	
Linework and neatness	3	
Total	**30**	

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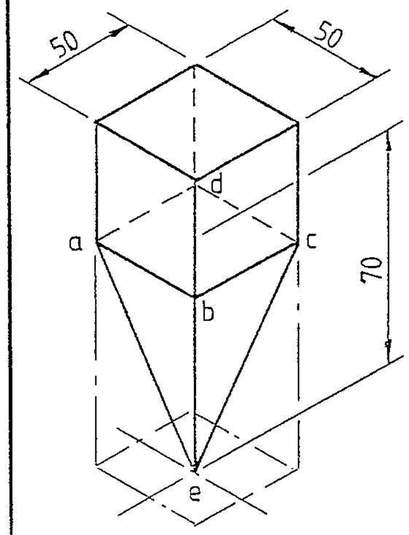
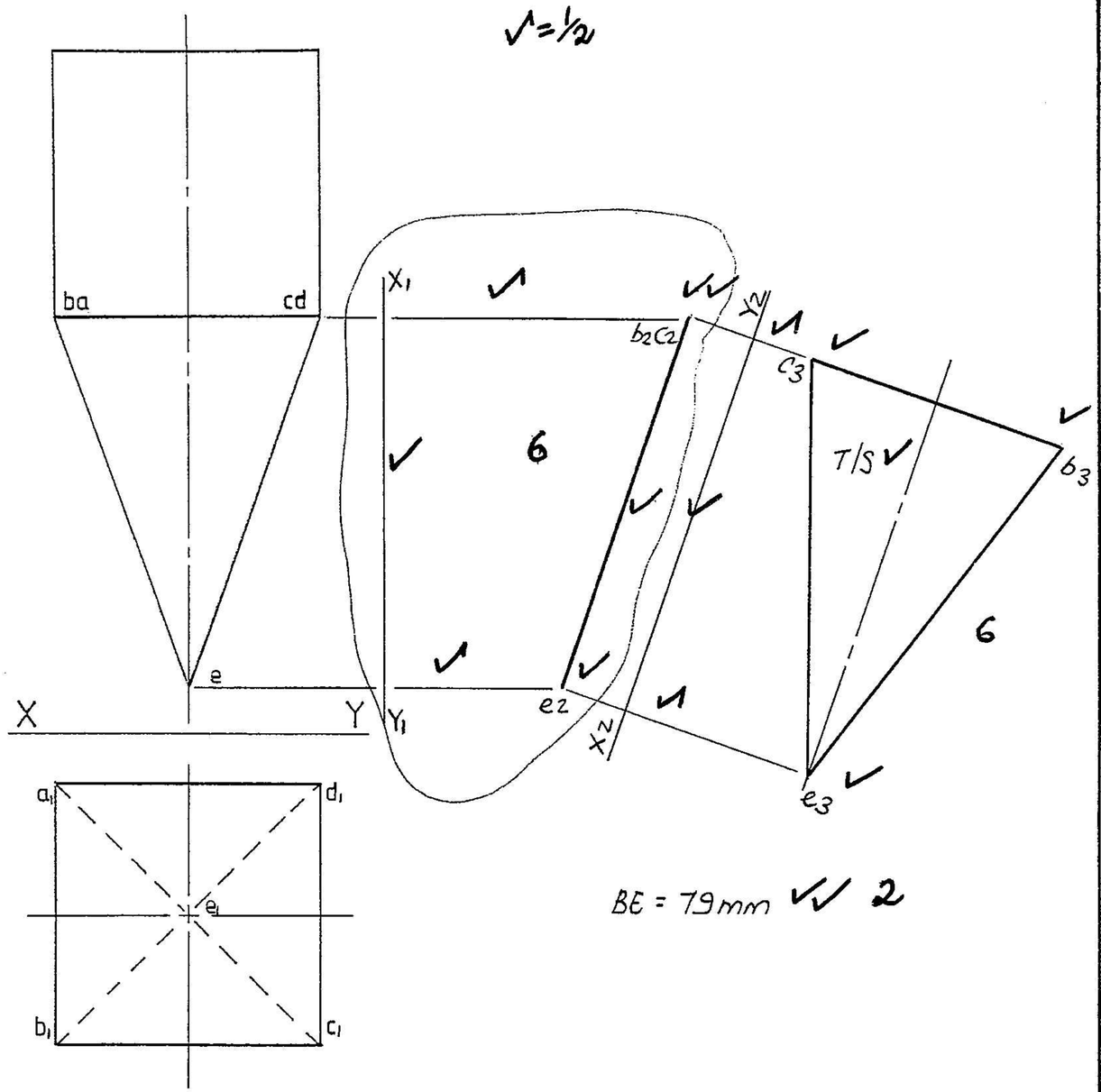
VRAAG 3
QUESTION





BE = 79mm ✓✓ 2

FIG. 4

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Vraag 4

Figuur 4 toon die isometriese aansig van ´n heiningpaal asook die vooraansig en bo-aansig van die paal. Sye AE, BE, CE en DE is ewe lank. Bepaal: 4.1 Die kantaansig van oppervlak BCE 4.2 Die ware vorm van oppervlak BCE 4.3 Die ware lengte van BE	6 6 2	
Lynwerk en netheid	1	
Totaal	**15**	

Question 4

Figure 4 shows an isometric view as well as the front and top views of a fence post. AE, BE, CE and DE are equal in length. Determine: 4.1 The edge view of surface BCE 4.2 The true shape of surface BCE 4.3 The true length of BE	6 6 2	
Linework and neatness	1	
Total	**15**	

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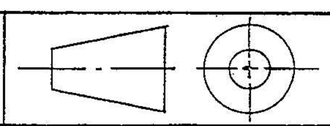
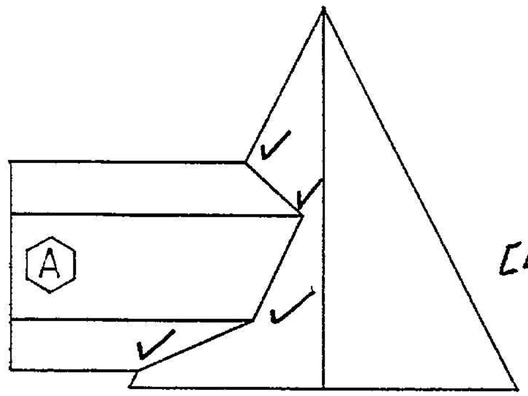
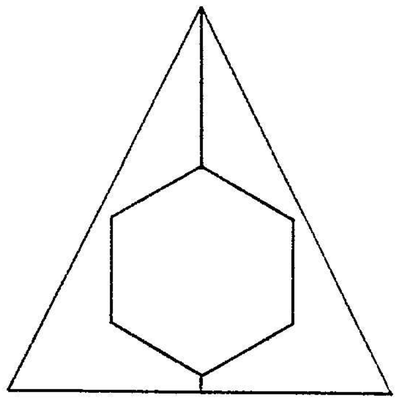
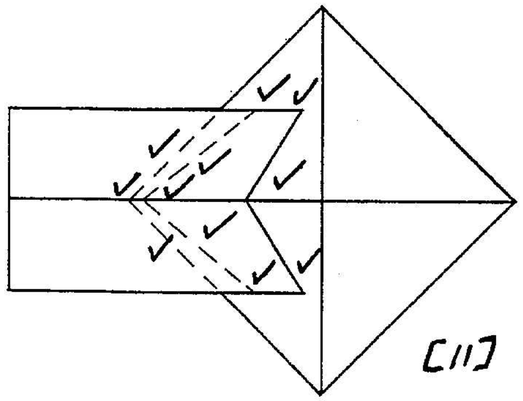
VRAAG 4
QUESTION





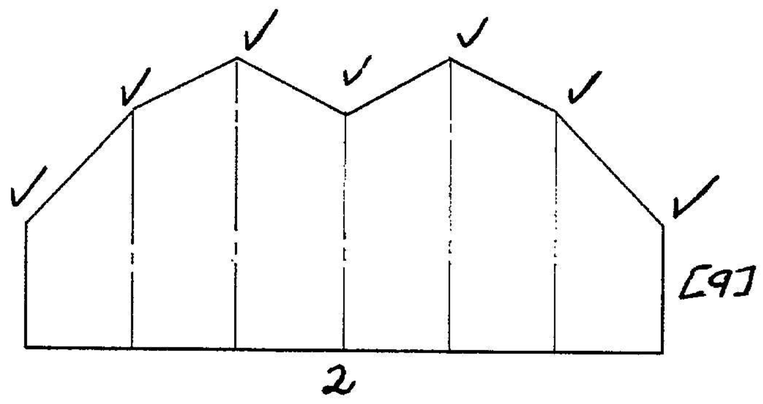
[4]





[11]

FIG. 5



[9]

2

TEGNIESE TEKENE
TECHNICAL DRAWING

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Vraag 5

Figuur 5 toon die onvoltooide vooraansig en boaansig asook die linkeraansig van 'n seskantige prisma wat 'n vierkantige piramide deurdring. Projekteer: 5.1 Die deurdringingskromme in die vooraansig 5.2 Die deurdringingskromme in die boaansig. (Toon aile verborge detail) 5.2 Die oppervlaksontwikkeling van die prisma **A**	4 11 9	
Lynwerk en netheid	2	
Totaal	**26**	

Question 5

Figure 5 shows the incompleted front view and top view as well as the left view of a hexagonal prism penetrating a square pyramid. Project: 5.1 The curve of interpenetration in the font view 5.2 The curve of interpenetration in the top view. (Show all hidden detail.) 5.3 The surface development of the prism **A**	4 11 9	
Linework and neatness	2	
Total	**26**	

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VRAAG
QUESTION 5

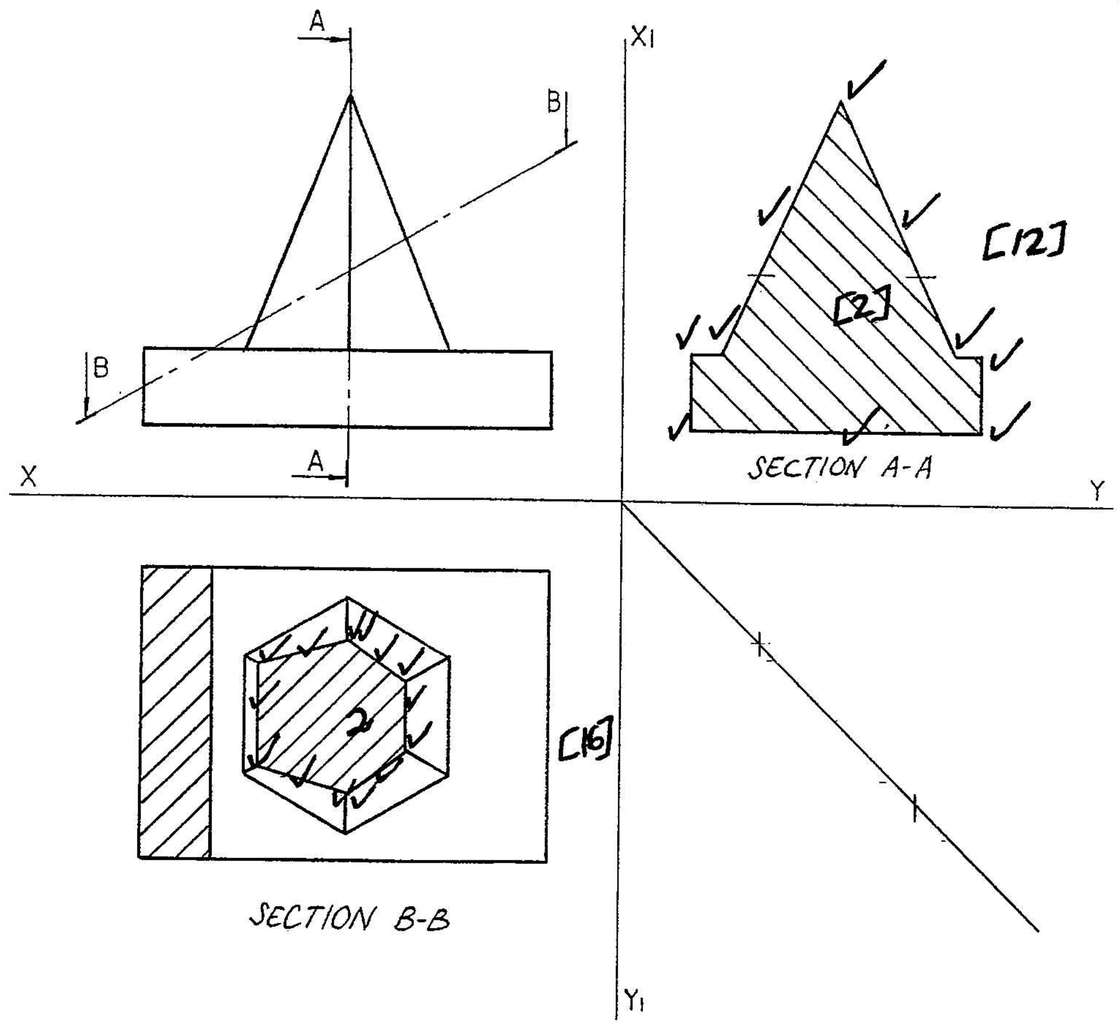

FIG. 6

[30]

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Vraag 6

Figuur 6 toon die vooraansig en onvoltooide boaansig van 'n papiergewig. Projekteer: 6.1 Die deursnsee linkeraansig op snyvlak A-A 6.2 Die deursnee boaansig op snyvlak B-B	12 16	
Lynwerk en netheid	2	
Totaal	**30**	

Question 6

Figure 6 shows the front view and incompleted top view of a paperweight Project: 6.1 The sectional left view on cutting plane A-A 6.2 The sectional top view on cutting cutting plane B-B	12 16	
Linework and neatness	2	
Total	**30**	

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VRAAG 6
QUESTION