

12/6/2017	PAUL	VERANDER VIERKANTIGE SPY NA WOODRUFF SPY CHANGE SQUARE KEY TO WOODRUFF KEY	3
22/5/2017	PAUL	VERWYDER WASTER REMOVE WASHER	2
8/5/2017	PAUL	VERANDER DIE NOK VORM CHANGE THE CAM FORM	1
DATUM DATE	HERSIEN DEUR CHANGED BY	BESKRYWING VAN HERSIENING REVISION DESCRIPTION	Nr. No.

TEKENING NR: DJJD-Z2/DOE | LÉERNAAM: DJJD-2017 | HITTE BEHANDELING: NORMAAL | HOEVEELHEID: 300  
 DRAWING NO: DJJD-Z2/DOE | FILE NAME: DJJD-2017 | HEAT TREATMENT: NORMAL | QUANTITY: 300

**BELTSPANNER**  
**BELT TENSIONER**

**SKAAL / SCALE**  
**1 : 1**

**HTS INGENIEURSWERKE**  
(SA) (Edms.) Bpk.  
**HTS ENGINEERING WORKS**  
(SA) (Pty) Ltd

SNELWEG 14  
MIGDOL  
2775  
WWW.HTS.CO.ZA  
083 461 4078

14 HIGH WAY  
MIGDOL  
2775  
WWW.HTS.CO.ZA  
083 461 4078

TENSY ANDERS VERMELD, IS ALLE AFMETINGS IN MILLIMETER MET 'N TOLERANSIE VAN 0,25.

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETRES WITH A TOLERANCE OF 0,25.

NAGESIEN: C MEYER  
DATUM: 06-05-2017  
CHECKED: C MEYER  
DATE: 06-05-2017

GOEDGEKEUR: M SMITH  
DATUM: 28-06-2017  
APPROVED: M SMITH  
DATE: 28-06-2017

TEKENPROGRAM:  
DRAWING PROGRAM:  
AUTO CAD 16

GETEKEN: P VISAGE  
DATUM: 01-05-2017  
DRAWN: P VISAGE  
DATE: 01-05-2017

**VRAAG 1**  
**ANALITIES (MEGANIES)**

Gegee:  
'n Tabel van vrae en onderdele van 'n Vibrasie-eenheid.  
Die deursnee-aansig is geteken volgens snyvlak A-A  
Instruksies:  
Voltooi die tabel deur die antwoorde, wat verwys na die samestelling, netjies te drukskryf in die voorbereide kolom.

**QUESTION 1**  
**ANALYTICAL (MECHANICAL)**

Given:  
A table with questions and parts of a Vibration unit.  
The sectional view is drawn to cutting plane A-A  
Instructions:  
Complete the table by means of answers, that refer to the assembly, by printing it neatly in the prepared column.

NO	VRAE / QUESTIONS	ANTWOORDE / ANSWERS	KORCOR	E	M
1	Op watter datum was die tekening nagesien? On what date was the drawing checked?	06-05-2017	1		
2	In watter dorp is die vervaardigingsmaatskappy geleë? In which town is the manufacturing company situated?	MIGDOL	1		
3	In watter SI-eenheid word die afmetings voorgestel? In which SI unit are the dimensions presented?	MILLIMETER / MILLIMETRE	1		
4	Wat is die lêernaam? What is the file name?	DJJD-2017	1		
5	Hoeveel oppervlaktes moet gemasjineer word? How many surfaces must be machined?	11	1		
6	Benoem aansig 1. Name view 1.	LINKERAANSIG LEFT VIEW	1		
7	Watter tipe hittebehandeling word verlang? What type of heat treatment is required?	NORMAAL NORMAL	1		
8	Op watter datum is die laaste hersiening gemaak? On what date was the last revision made?	12/6/2017	1		
9	Bepaal die afmetings by A: Determine the dimensions at A:	Ø18 (1 MARK FOR Ø AND 1 FOR 18)	2		
10	Wat sal die afmeting (B) wees indien 'n skaal 1:5 gebruik is? What would the dimension (B) be if a scale 1:5 was used?	30	1		
11	Wat word onderdeel C genoem? What is part C called?	WOODRUFF SPY WOODRUFF KEY	2		
12	Wat word onderdeel D genoem? What is part D called?	LAER BEARING	1		
13	Wat word onderdeel E genoem? What is part E called?	VEER SPRING	1		
14	Met verwysing na die toleransie, bepaal die minimum grootte van die gat by H? With reference to the tolerance, determine the minimum size of the hole at H?	14,75	2		
15	Met verwysing na die toleransie, bepaal die maksimum grootte van die gat by H? With reference to the tolerance, determine the maximum size of the hole at H?	15,25	2		
16	In die blok hieronder, (ANTWOORD 16), teken, in netjiese vryhand, die simbool wat vir die projeksiesisteem gebruik word. In the box below, (ANSWER 16), draw, in neat freehand, the symbol for the projection system used.		4		
17	Die snyvlak A-A is nie aangedui. Teken dit op aansig 1 of aansig 2 korrek. Cutting plane A-A is not indicated. Draw it on view 1 or view 2 correctly.		3		

ANTWOORD 16  
ANSWER 16

VRYHAND  
FREE HAND

**TOTAAL / TOTAL 26**



**VRAAG 2: MEGANIESE SNIT**

**Gegee:**

Die vooraansig en bo-aansig. Die onvoltooide vooraansig en die onvoltooide bo-aansig van 'n gietstuk in D.O.P.

**Instruksies:**

Gebruik skaal 1 : 1, beantwoord die volgende:

- 2.1 Voltooi die voor- en bo-aansig.  
(ALLE konstruksies moet getoon word by die kurve(s))
- 2.2 'n Deursnee linkeraansig volgens snyvlak BB  
(ALLE konstruksies moet getoon word by die kurve(s))

**Nota:**

Alle onbekende kurwes is R5

**QUESTION 2: MECHANICAL SECTION**

**Given:**

The front view and top view. The incomplete front view and an incomplete top view of a casting in T.A.O.P.

**Instructions:**

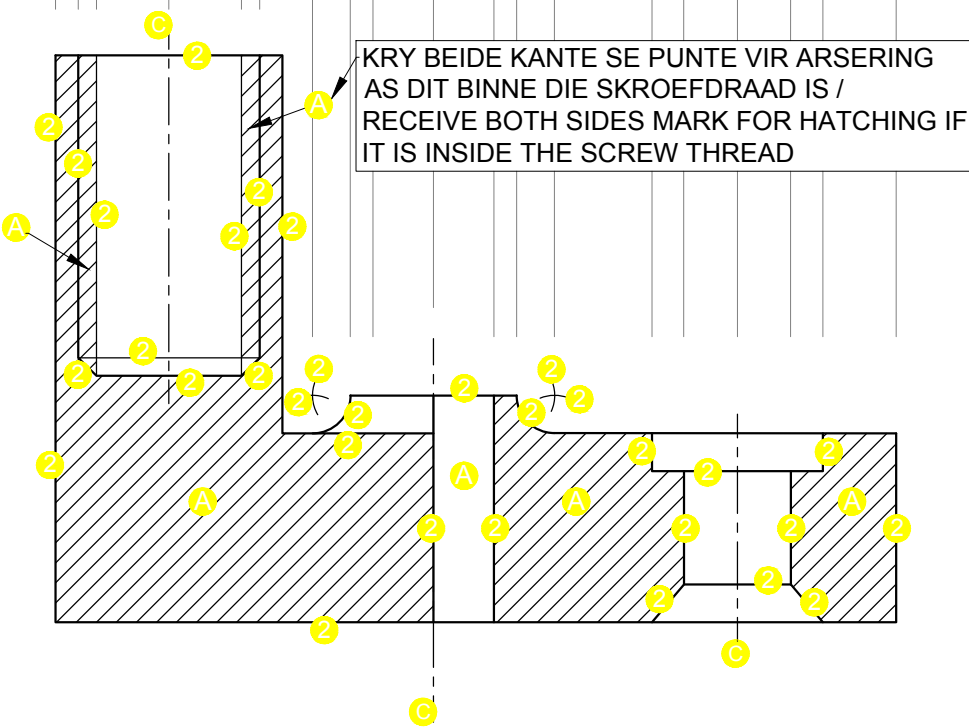
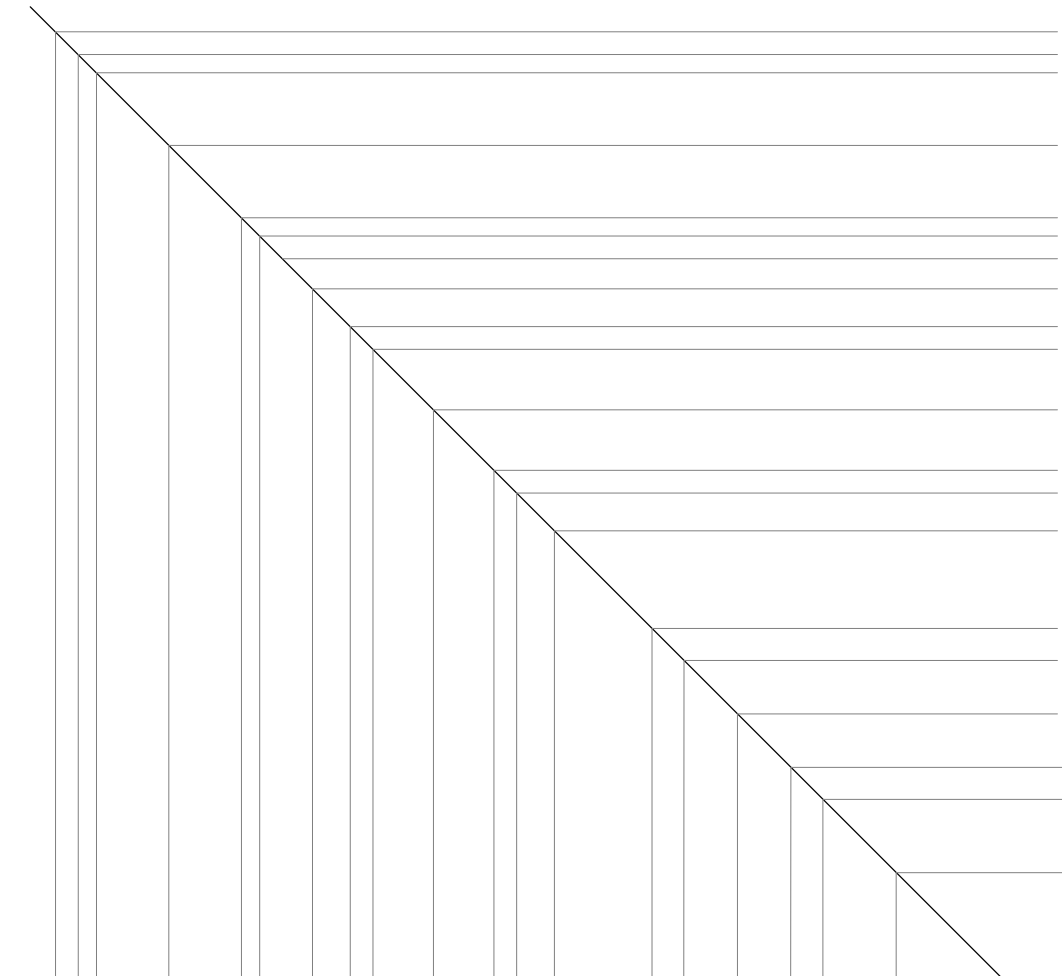
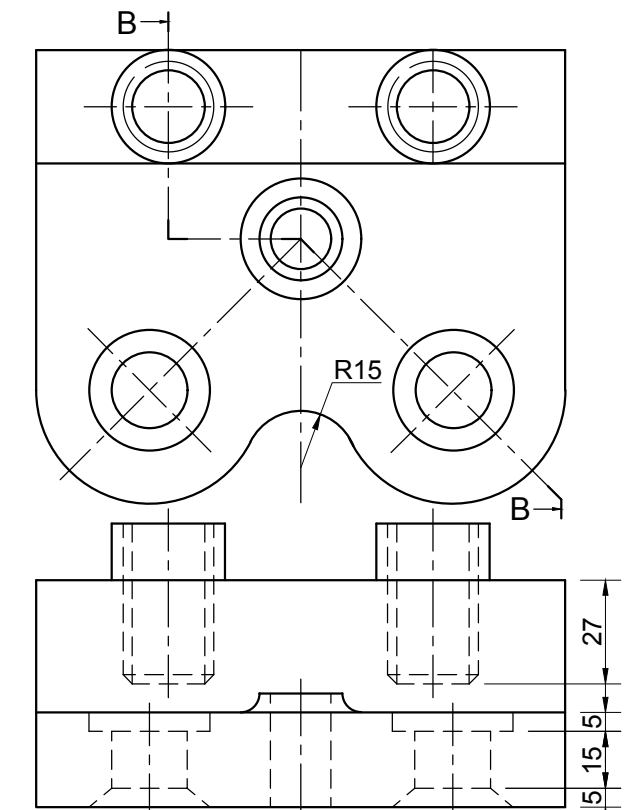
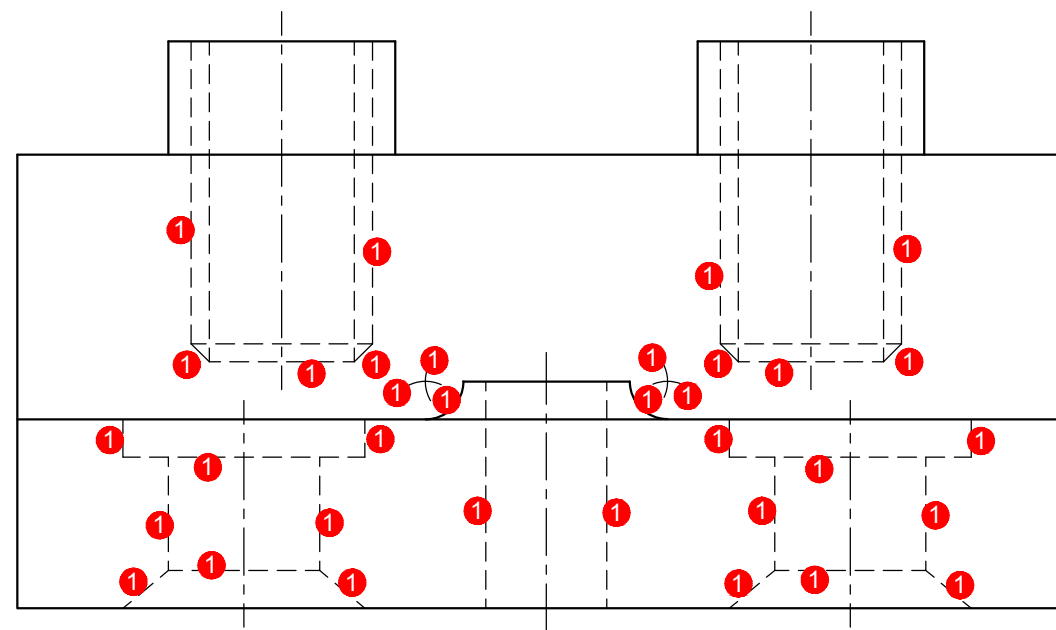
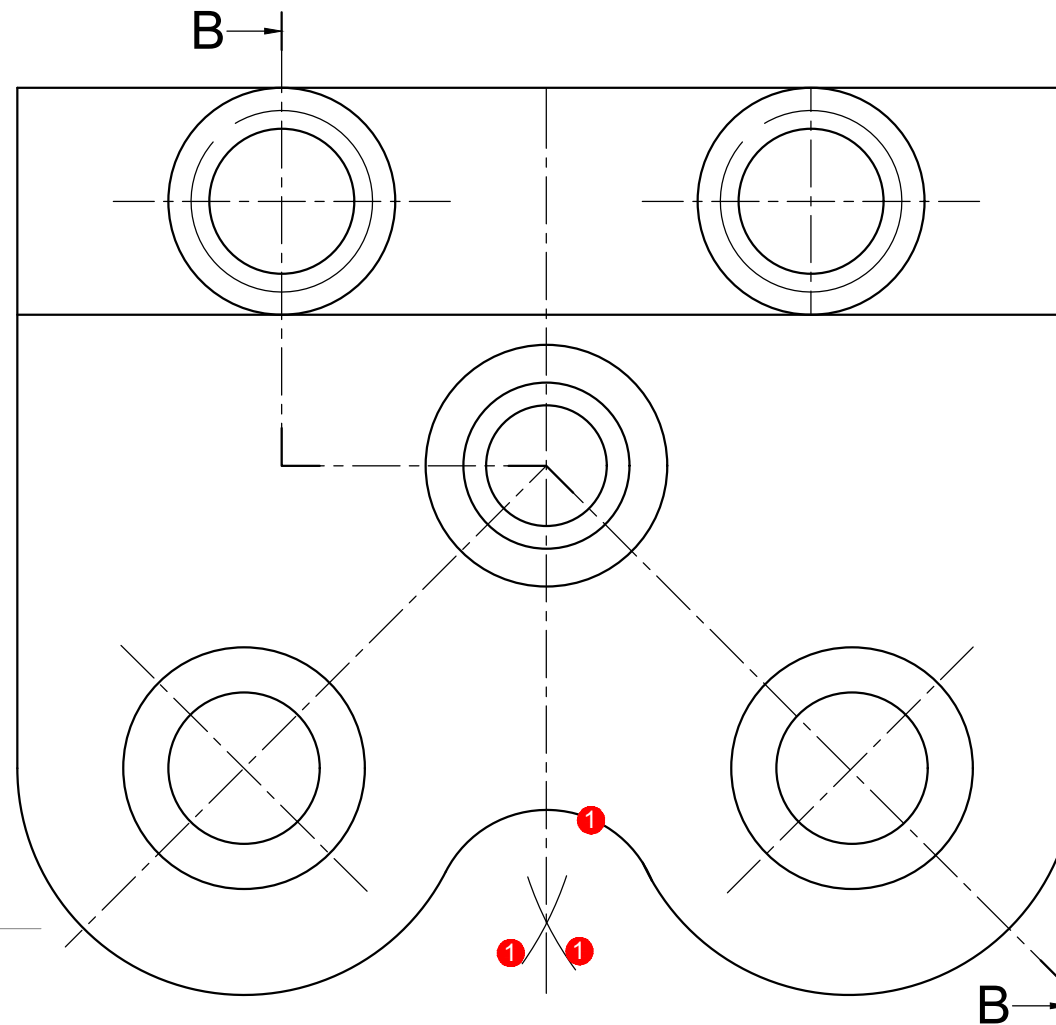
Using scale 1 : 1, answer the following:

- 2.1 Complete the front - and top view.  
(ALL constructions must be shown at the curve(s))
- 2.2 A sectional left view according to cutting plane BB  
(ALL constructions must be shown at the curve(s))

**Note:**

All unknown curves are R5

MEGANIESE SNIT / MECHANICAL SECTION		KOR COR	E	M
1	VOORAANSIG + BO-AANSIG FRONT VIEW + TOP VIEW (37/2)	18.5		
2	DEURSNEE LINKERAANSIG SECTIONAL LEFT VIEW (41/2)	20.5		
<b>TOTAAL</b>		39		



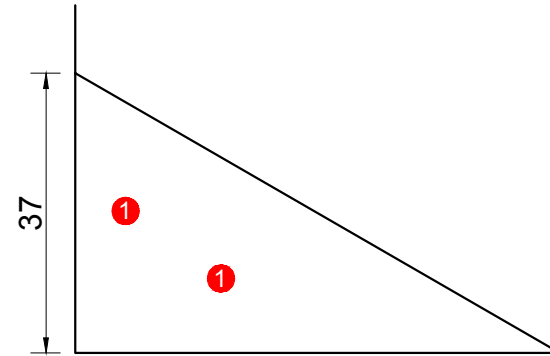
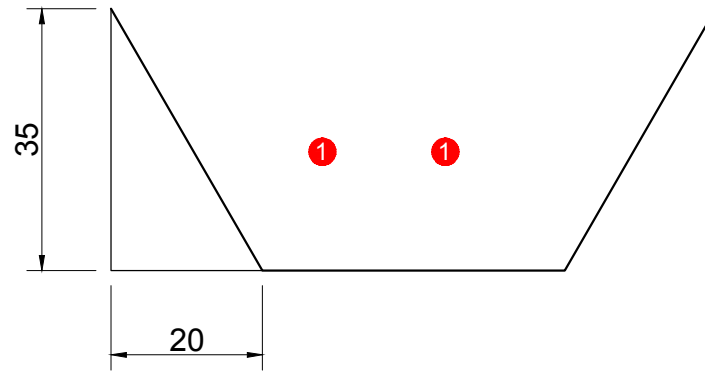


**VRAAG 3: ISOMETRIES**

**Gegee:**  
Die vooraansig en linkeraansig van 'n GIETSTUK.

**Instruksies:**  
Deur gebruik te maak van skaal 1 : 1, omskep die ortografiese-aansigte van die GIETSTUK in 'n isometriese tekening.

Maak A die laagste punt op die tekening.  
Wys ALLE noodsaaklike konstruksies.  
GEEN verborge detail word verlang nie.

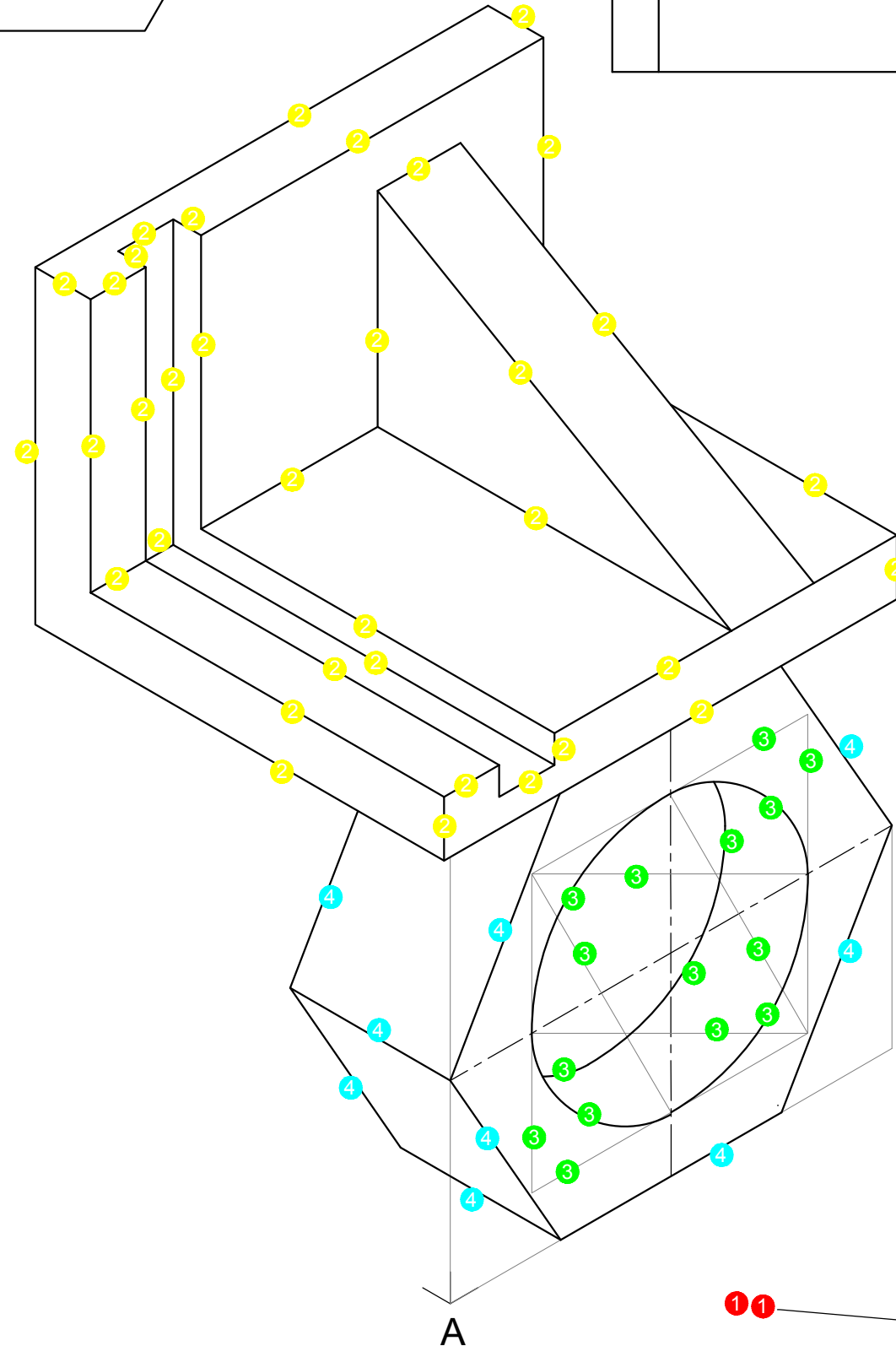
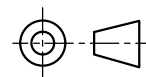
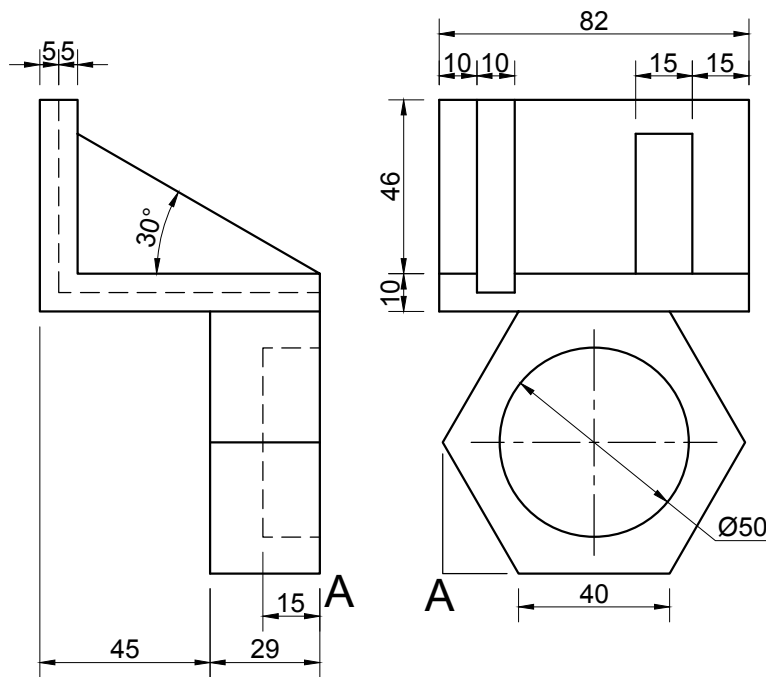


**QUESTION 3: ISOMETRIC**

**Given:**  
The front view and a left view of a casting.

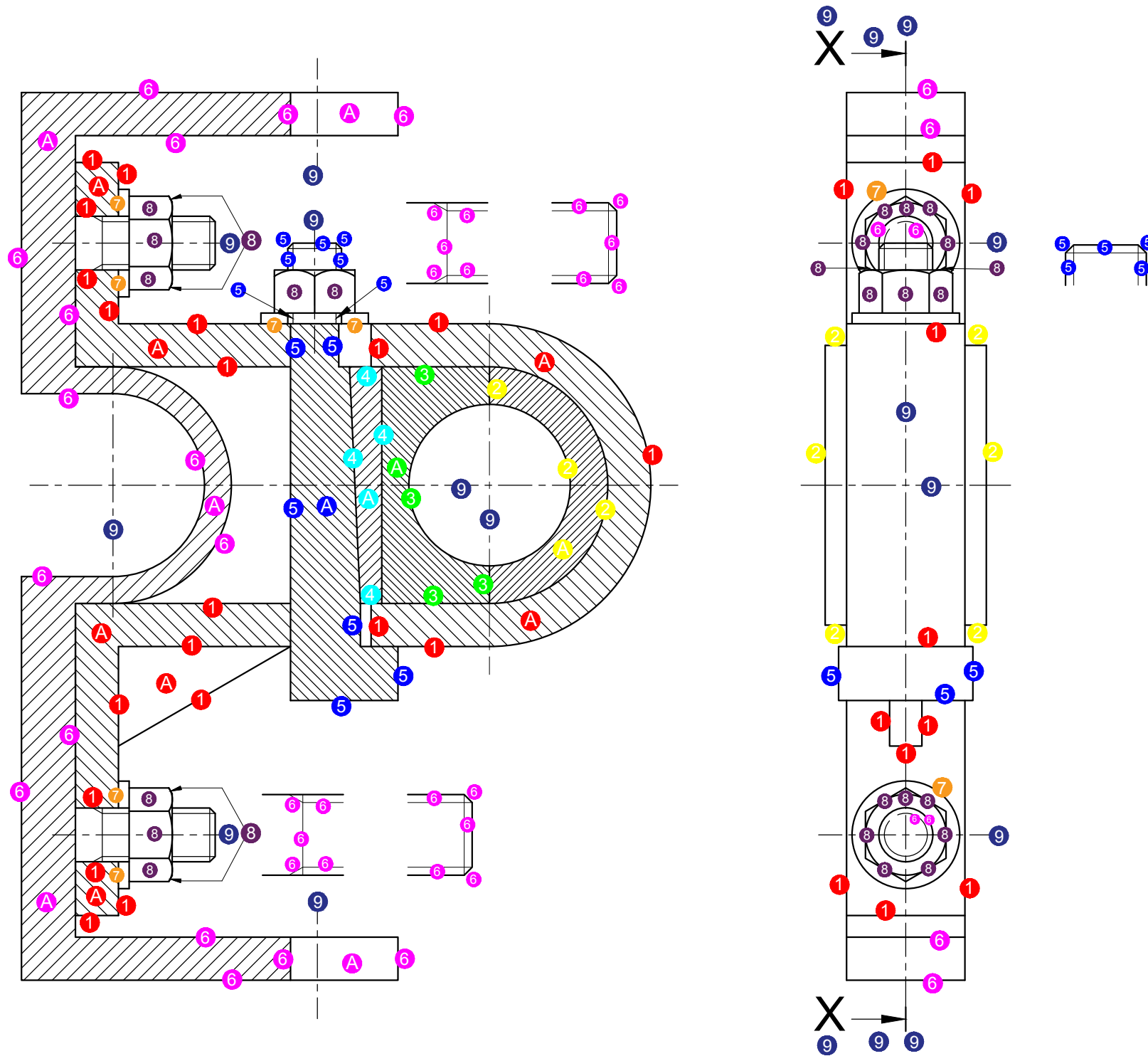
**Instructions:**  
Using scale 1 : 1, convert the orthographic views of the casting into a isometric drawing.

Make A the lowest point of the drawing.  
Show ALL necessary construction.  
NO hidden detail is required.



1 1 → PLASING PLACEMENT

ISOMETRIES ISOMETRIC		E	M
1	HULPAANSIG + PLASING AUXILIARY VIEW + PLACEMENT	6	
2	ISOMETRIESELYNE & NIE ISOMETRIESELYNE ISOMETRIC LINES & NON ISOMETRIC LINES <sup>(35/2)</sup>	17.5	
3	SIRKEL + KONSTRUKSIE CIRCLE + CONSTRUCTION <sup>(15/2)</sup>	7.5	
4	SESKANT HEXAGON	9	
<b>TOTAAL TOTAL</b>		<b>40</b>	

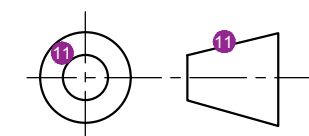


DEURSNEE VOORAANSIG SECTIONAL FRONT VIEW			KOR COR	E	M
1	MONTEERRAAM MOUNTING FRAME (27/2)	13.5			
2	VOORSTE LAERHELFTTE FRONT BEARING HOUSING (4/2)	2			
3	AGTERSTE LAERHELFTTE REAR BEARING HOUSING (5/2)	2.5			
4	DRUKPLAAT PRESSURE PLATE (5/2)	2.5			
5	SPESIALE BOUT SPECIAL BOLT (14/2)	7			
6	MONTEERPLAAT MOUNTING PLATE (41/2)	20.5			
7	WASTER WASHER (6/2)	3			
8	M10 MOER M10 NUT (10/2)	5			
<b>SUB-TOTAAL SUB-TOTAL</b>			<b>56</b>		

REGTERAANSIG RIGHT VIEW			KOR COR	E	M
1	MONTEERRAAM MOUNTING FRAME (11/2)	5.5			
2	VOORSTE LAERHELFTTE FRONT BEARING HOUSING (6/2)	3			
5	SPESIALE BOUT SPECIAL BOLT (8/2)	4			
6	MONTEERPLAAT MOUNTING PLATE (8/2)	4			
7	WASTER WASHER (2/2)	1			
8	M10 MOER M10 NUT (17/2)	8.5			
<b>SUB-TOTAAL SUB-TOTAL</b>			<b>26</b>		

TEGNIËSE VERSORING TECHNICAL PROVISION			KOR COR	E	M
9	SNYVLAK A-A + SENTERLYNE SECTIONAL PLANE A-A + CENTRE LINES (18/2)	9			
10	TITEL & SKAAL TITLE & SCALE	2			
11	PROJEKSIESIMBOOL PROJECTION SYMBOL	2			
<b>SUB-TOTAAL SUB-TOTAL</b>			<b>13</b>		
<b>TOTAAL TOTAL</b>			<b>95</b>		

PROJEKSIESIMBOOL / PROJECTION SYMBOL



TITEL / TITLE	
DRYFASSTUT / DRIVE SHAFT SUPPORT 10	
SKAAL / SCALE	
SKAAL 1:1 / SCALE 1:1 10	

DIAGRAMVEL 4B  
DIAGRAM SHEET 4B

VRAAG 4  
QUESTION 4

INGENIEURSGRAFIKA EN ONTWERP  
ENGINEERING GRAPHICS AND DESIGN

JUNIE 2017 VRAESTEL 2  
JUNE 2017 PAPER 2

NAAM & VAN  
NAME & SURNAME

GRAAD  
GRADE