

**ISEBE LEMFUNDO LEMPUMA KOLONI  
EASTERN CAPE EDUCATION DEPARTMENT  
OOS-KAAP ONDERWYSDEPARTEMENT**

**NATIONAL SENIOR CERTIFICATE  
NASIONALE SENIOR SERTIFIKAAT**

**GRADE 12**

**GRAAD 12**

**ENGINEERING GRAPHICS AND DESIGN P2  
INGENIEURSGRAFIKA EN -ONTWERP V2**

**SEPTEMBER 2019**

**MARKING GUIDE  
NASIENRIGLYN**

**PUNTE: 200**

**MARKS: 200**

**TYD: 3 uur**

**TIME: 3 hours**

**Die nasienriglyn bestaan uit 7 bladsye.**

**This marking guide consists of 7 pages.**

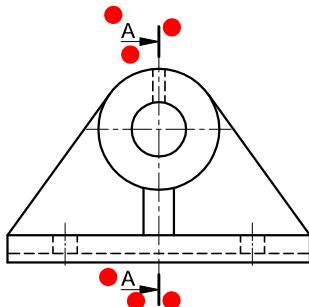
**Kopiereg voorbehou**

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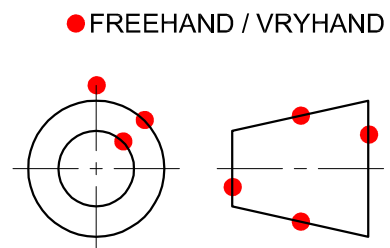
<b>ANTWOORDE</b>		
1	SHAINE	1
2	UITENHAGE	1
3	1 : 2	1
4	GIETYSYTER	1
5	TERMIESE BESPUITING	1
6	NTS-07	1
7	0.15	1
8	A) Ø8 B) 3 C) Ø80 D) 60°	4
9	14.4	1
10	VERWYDERDE SNIT	1
11	2.5	1
12	8	1
13	$R13 + 136 + 44 = 193$	2
14	OM DIE OPPERVLAKTE VAN DIE GIETSTUK TE BESKERM OF OM 'N PLAT VLAK TE VOORSIEN OM DIE MOER OP VAS TE DRAAI.	2
15		3
16		4
	<b>TOTAAL</b>	<b>25</b>

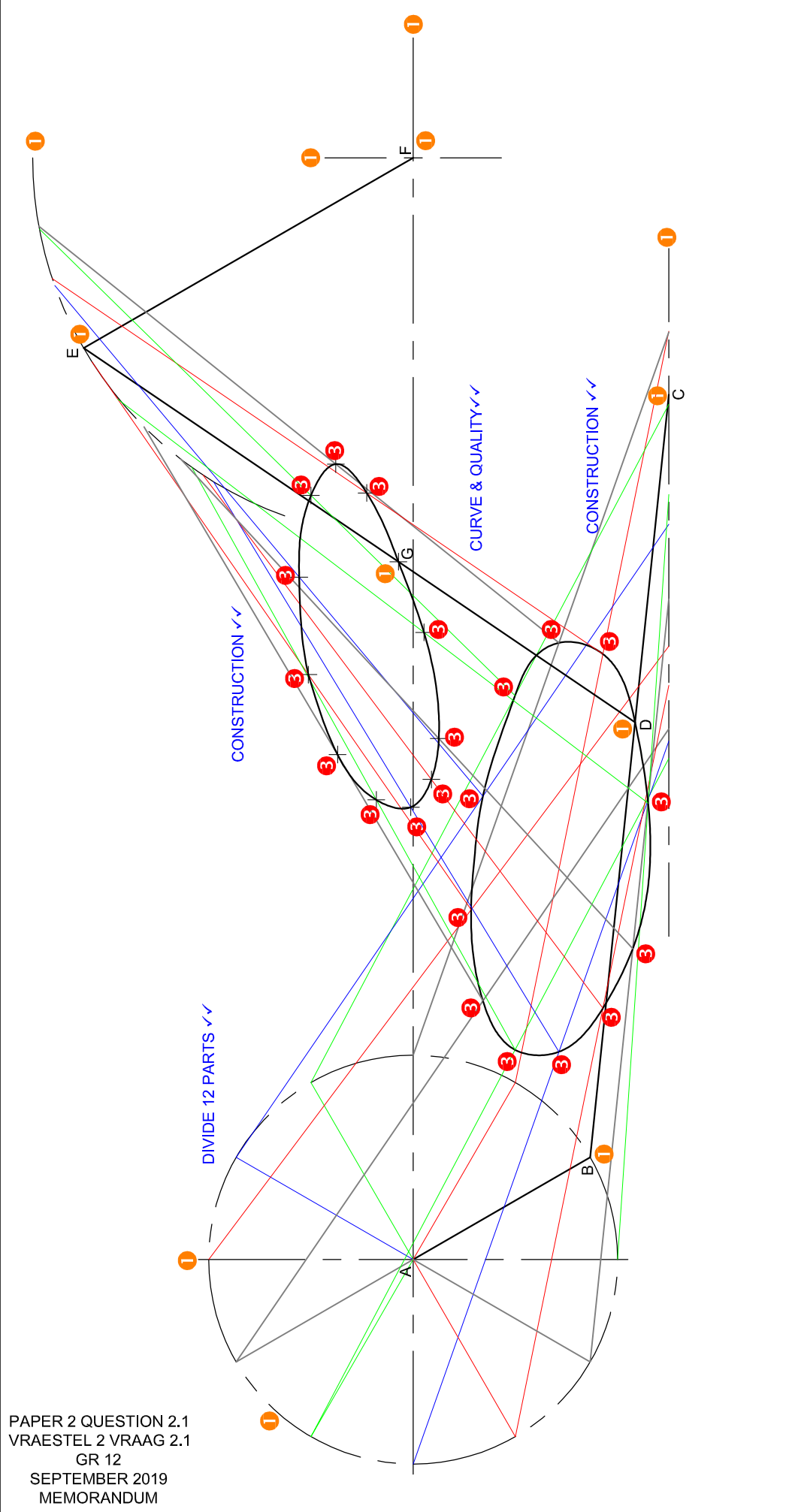
<b>ANSWERS</b>		
1	SHAINE	1
2	UITENHAGE	1
3	1 : 2	1
4	CAST IRON	1
5	THERMAL SPRAYING	1
6	NTS-07	1
7	0.15	1
8	A) Ø8 B) 3 C) Ø80 D) 60°	4
9	14.4	1
10	REMOVED SECTION	1
11	2.5	1
12	8	1
13	$R13 + 136 + 44 = 193$	2
14	TO PROTECT THE SURFACE OF THE CASTING OR TO SUPPLY A FLAT SURFACE FOR THE NUT TO BE TIGHTENED.	2
15		3
16		4
	<b>TOTAL</b>	<b>25</b>

**ANTWOORD 15  
ANSWER 15**



**ANTWOORD 16  
ANSWER 16**

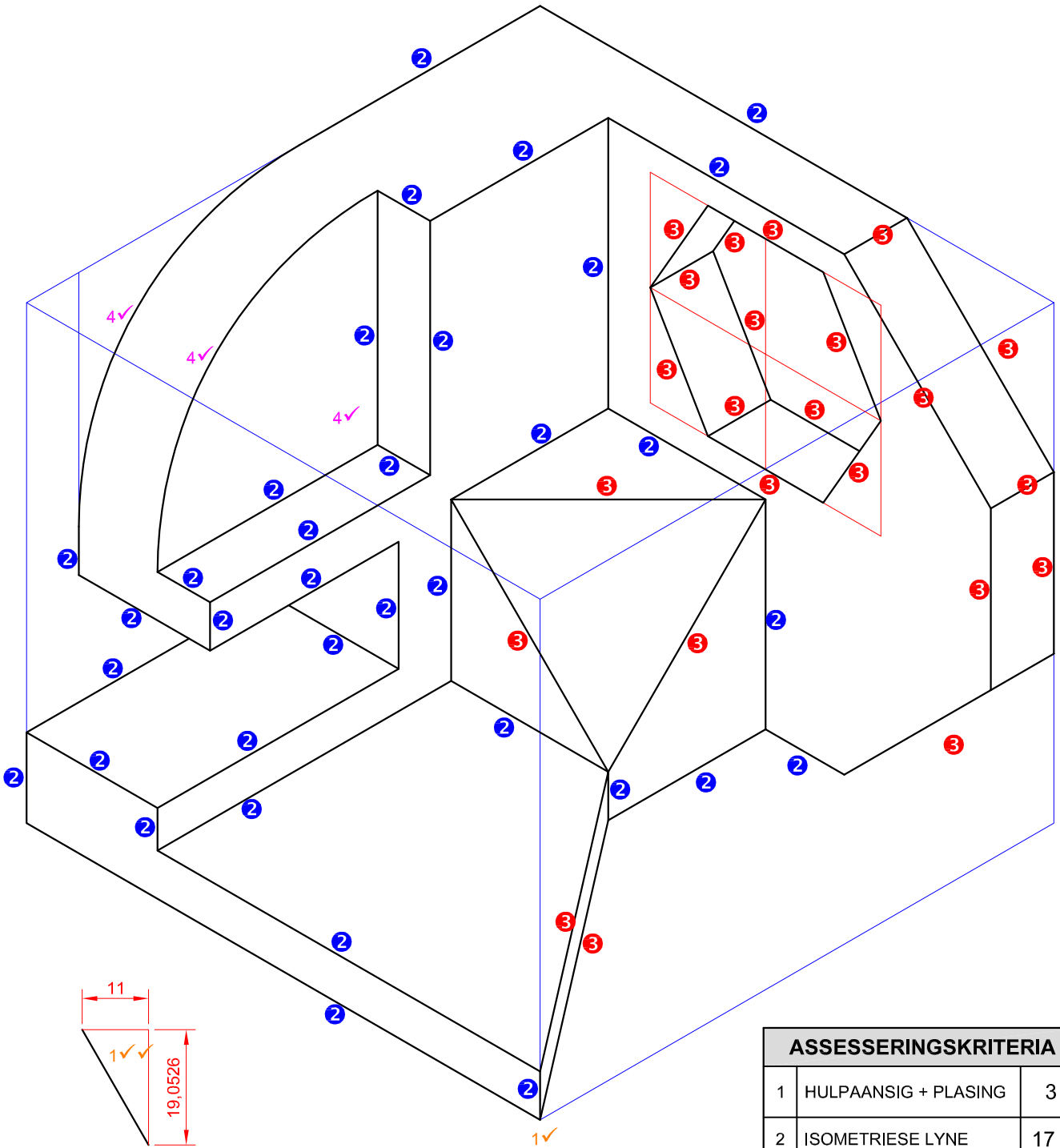




ASSESSMENT CRITERIA		ASSESSERINGSKRITERIA			
1	GIVEN	6	1	GEGEE	6
2	CONSTRUCTION	6	2	KONSTRUKSIE	6
3	LOC POINTS	11	3	LOKUSPUNTE	11
4	CURVE + QUALITY	2	4	KURWE + KWALITEIT	2
	<b>TOTAL</b>	<b>25</b>		<b>TOTAAL</b>	<b>25</b>

PAPER 2 QUESTION 2.1  
 VRAESTEL 2 VRAAG 2.1  
 GR 12  
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 MEMORANDUM



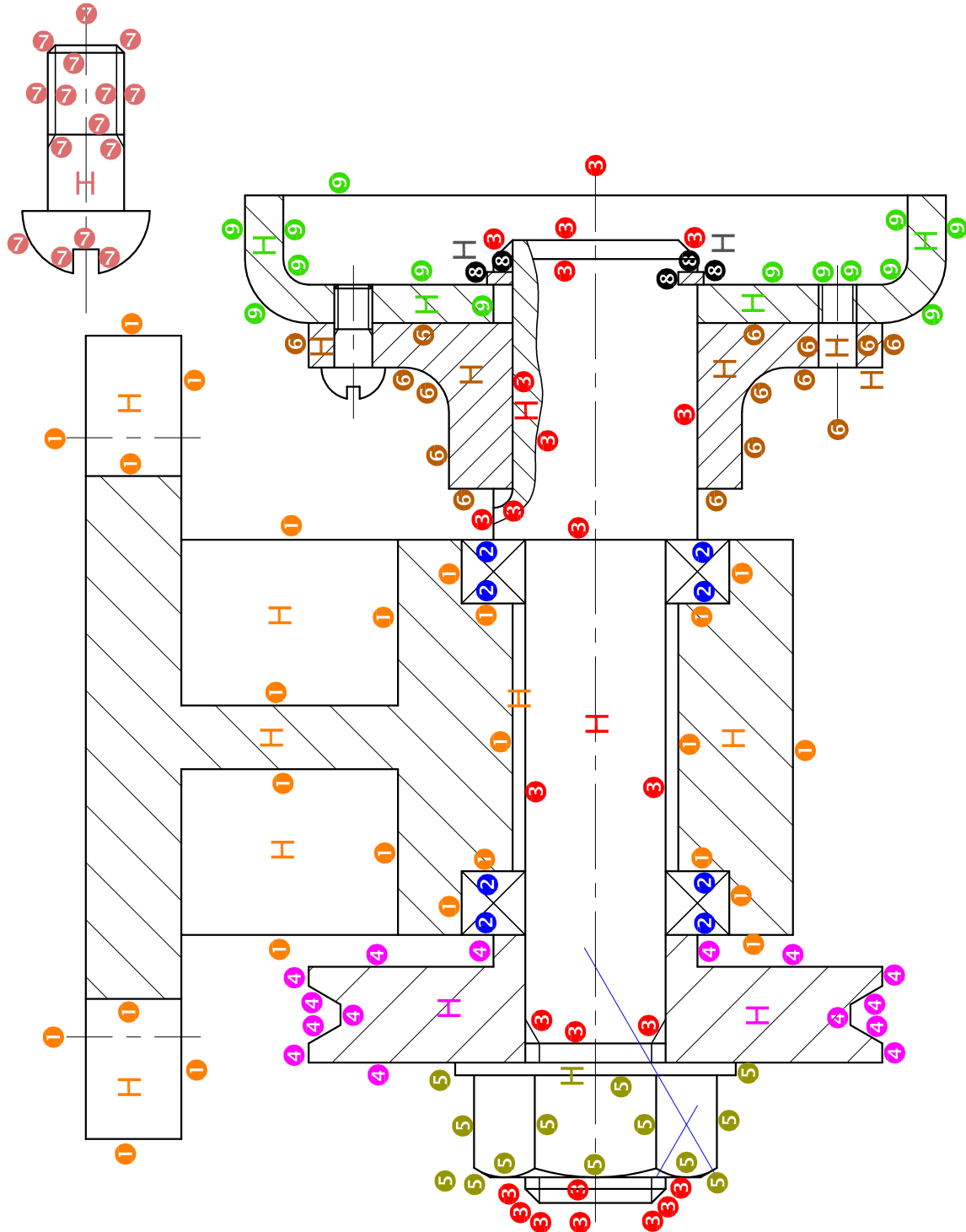


ASSESSERINGSKRITERIA		
1	HULPAANSIG + PLASING	3
2	ISOMETRIESE LYNE	17 $\frac{1}{2}$
3	SESKANT + 45°	11 $\frac{1}{2}$
4	SIRKEL	3
<b>TOTAAL</b>		<b>35</b>
ASSESSMENT CRITERIA		
1	AUX' VIEW + PLACING	3
2	ISOMETRIC LINES	17 $\frac{1}{2}$
3	HEXAGON + 45°	11 $\frac{1}{2}$
4	CIRCLE	3
<b>TOTAL</b>		<b>35</b>

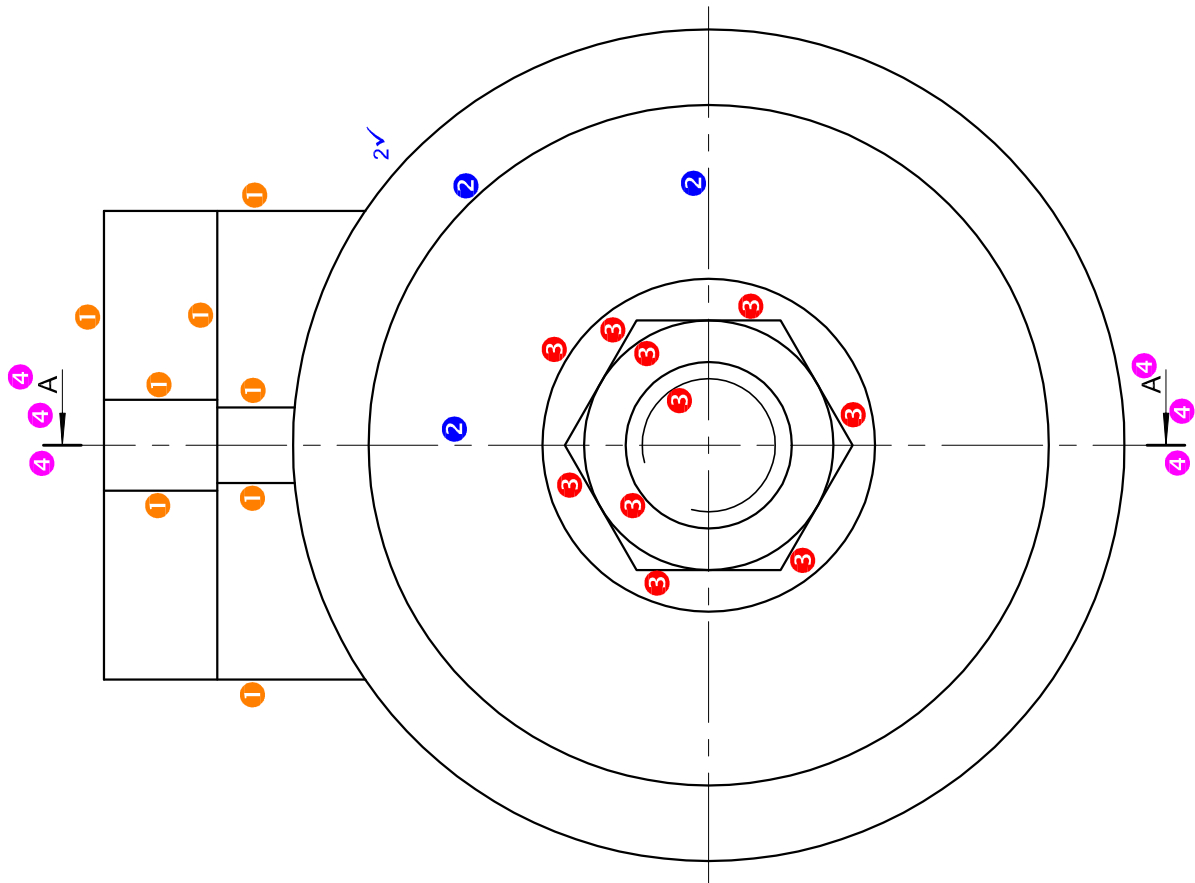
PAPER 2 QUESTION 3  
 VRAESTEL 2 VRAAG 3  
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ASSESSERINGSKRITERIA	
<b>DEURSNEE VOORAANSIG</b>	
1	STEUNSTUK
2	LAERS
3	AS
4	KATROL
5	MOER + WASTER
6	PLAAT
7	SKROEF
8	BORGRING
9	HOUER
<b>SUB-TOTAAL 79</b>	

ASSESSMENT CRITERIA	
<b>SECTIONAL FRONT VIEW</b>	
1	BRACKET
2	BEARINGS
3	SHAFT
4	PULLEY
5	NUT + WASHER
6	PLATE
7	SCREW
8	CIRCLIP
9	HOUSING
<b>SUB-TOTAL 79</b>	



PAPER 2 QUESTION 4  
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ASSESSERINGSKRITERIA	
<b>LINKERAANSIG</b>	
1	STEUNSTUK 4
2	HOUER + KATROL + SL 2½
3	MOER + WASTER 5
4	SNYLYN 3
5	SAMESTELLING 4½
<b>SUB-TOTAAL 19</b>	
<b>TOTAAL 98</b>	
ASSESSMENT CRITERIA	
<b>LEFT VIEW</b>	
1	BRACKET 4
2	HOUSING + PULLEY + CL 2½
3	NUT + WASHER 5
4	CUTTING PLANE 3
5	ASSEMBLY 4½
<b>SUB-TOTAL 19</b>	
<b>TOTAL 98</b>	