

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

**NATIONAL SENIOR CERTIFICATE  
NASIONALE SENIOR SERTIFIKAAT**

**GRADE 11**

**GRAAD 11**

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

**NOVEMBER 2017**

**MEMORANDUM**

**PUNTE: 200**

**MARKS: 200**

**TYD: 3 uur**

**TIME: 3 hours**

**Die memorandum bestaan uit 7 bladsye.**

**This memorandum consists of 7 pages.**

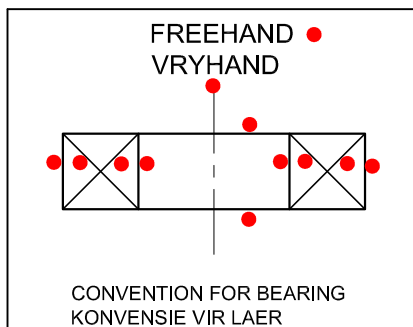
**Kopiereg voorbehou**

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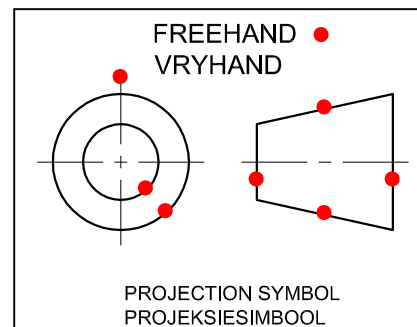


ANSWERS			ANTWOORDE		
1	1:2	1	1	1:2	1
2	SPRING STEEL	1	2	SPRING STAAL	1
3	AUTOCAD 2015	1	3	AUTOCAD 2015	1
4	TEN-53-2017	1	4	TEN-53-2017	1
5	www.pulley.co.za	1	5	www.katrol.co.za	1
6	0,35	1	6	0,35	1
7	SPRING SPECIFICATION	1	7	VEER SPESIFIKASIE	1
8	45°	1	8	45°	1
9	SCREW THREAD	1	9	SKROEFDRAAD	1
10	S-BREAK	1	10	S-BREEK	1
11	FILLET	1	11	FILLET / BINNE RONDING	1
12	R6	1	12	R6	1
13	HIDDEN DETAIL	1	13	VERBORGE BESONDERHEDE	1
14	TOTAL LENGTH	1	14	TOTALE LENGTE	1
15	71	2	15	71	2
16	8	2	16	8	2
17	HALF SECTION	1	17	HALF DEURSNEE	1
18	ACROSS FLAT	1	18	OORKANT	1
19		6	19		6
20		4	20		4
<b>TOTAL</b>		<b>30</b>	<b>TOTAAL</b>		<b>30</b>

ANSWER 19 / ANTWOORD 19



ANSWER 20 / ANTWOORD 20



SHOWING METHOD OF PROJECTION FROM GRAPH 3 ✓✓

TOON METODE VAN PROJEKSIE VANAF GRAFIEK NA PROFIEL 3 ✓✓

DIVEIDE 12 PARTS 3 ✓✓✓

VERDELING 12 DELE 3 ✓✓✓

SHOWING METHOD OF PROJECTING POINTS ONTO DEGREE LINES 3 ✓✓

TOON METODE VAN PROJEKSIE VAN PUNTE NA DIE GRADE LYNE 3 ✓✓

TOON GRADE 2 ✓✓

DEGREES INDICATED 2 ✓✓

DEGREES INDICATED 1 ✓✓

ACCURATE CONSTRUCTION OF GRAPH 12 x 8 mm 1 ✓✓

DISPLACEMENT GRAPH VERPLASINGSDIAGRAM

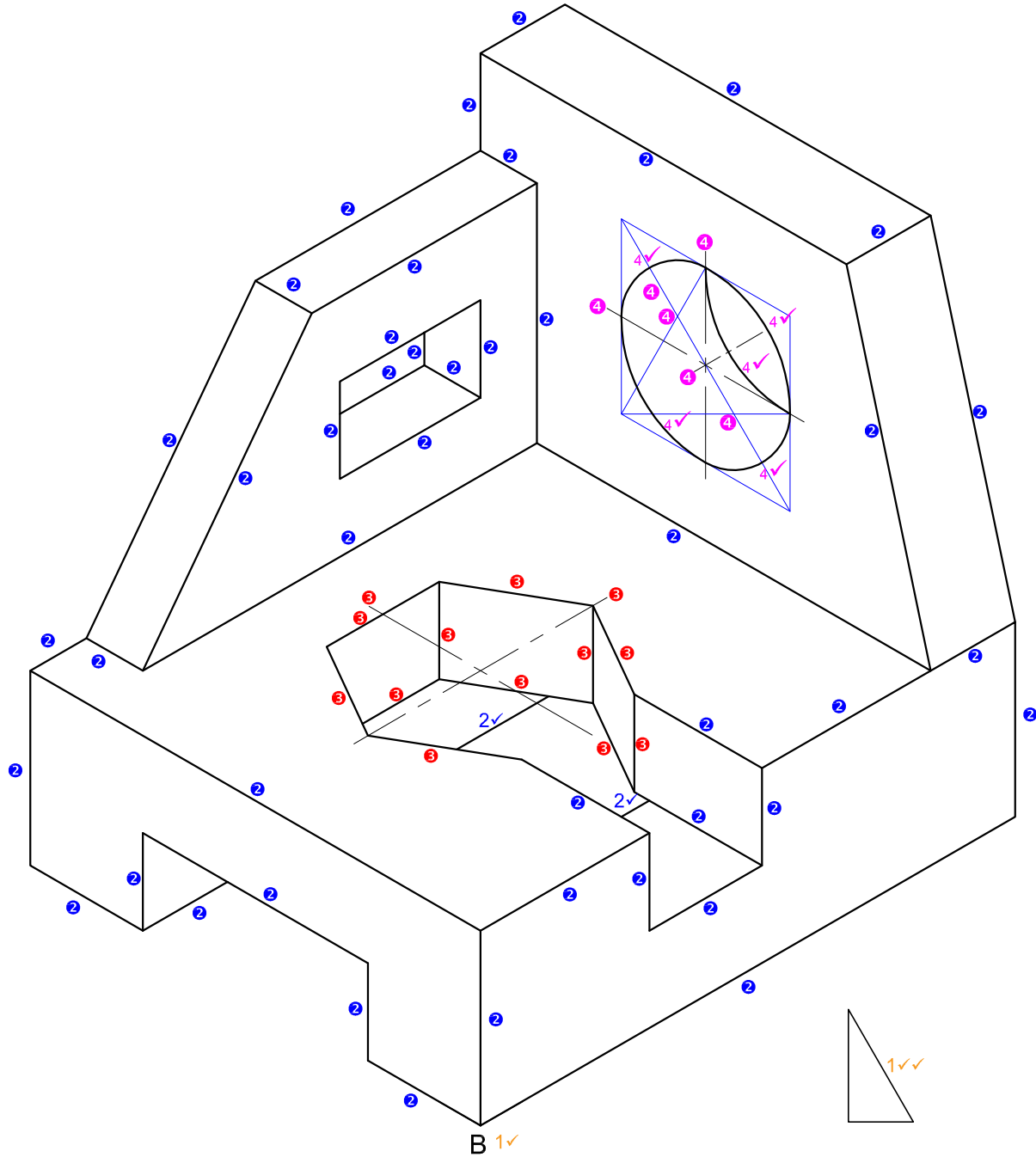
SCALE 8 mm : 30° SKAAL 8 mm : 30° 1 ✓✓

TOON GRADE 1 ✓✓

AKKURATE KONSTRUKSIE VAN GRAFIEK 12 x 8 mm 1 ✓✓

ASSESSERINGSKRITERIA		ASSESSMENT CRITERIA	
1. GRAFIEK + BYSKRIF	11	1. GRAPH + LABEL	11
2. PYL + AS + MIN RADIUS + GRADE + SL	6	2. ARROW + SHAFT + MIN RADIUS + DEGREE + C L	6
3. KONSTRUKSIE	7	3. CONSTRUCTION	7
4. NOKPUNTE	8	4. CAM POINTS	8
5. KURWE KWALITEIT	6	5. CURVE + QUALITY	6
<b>TOTAAL</b>	<b>38</b>	<b>TOTAL</b>	<b>38</b>

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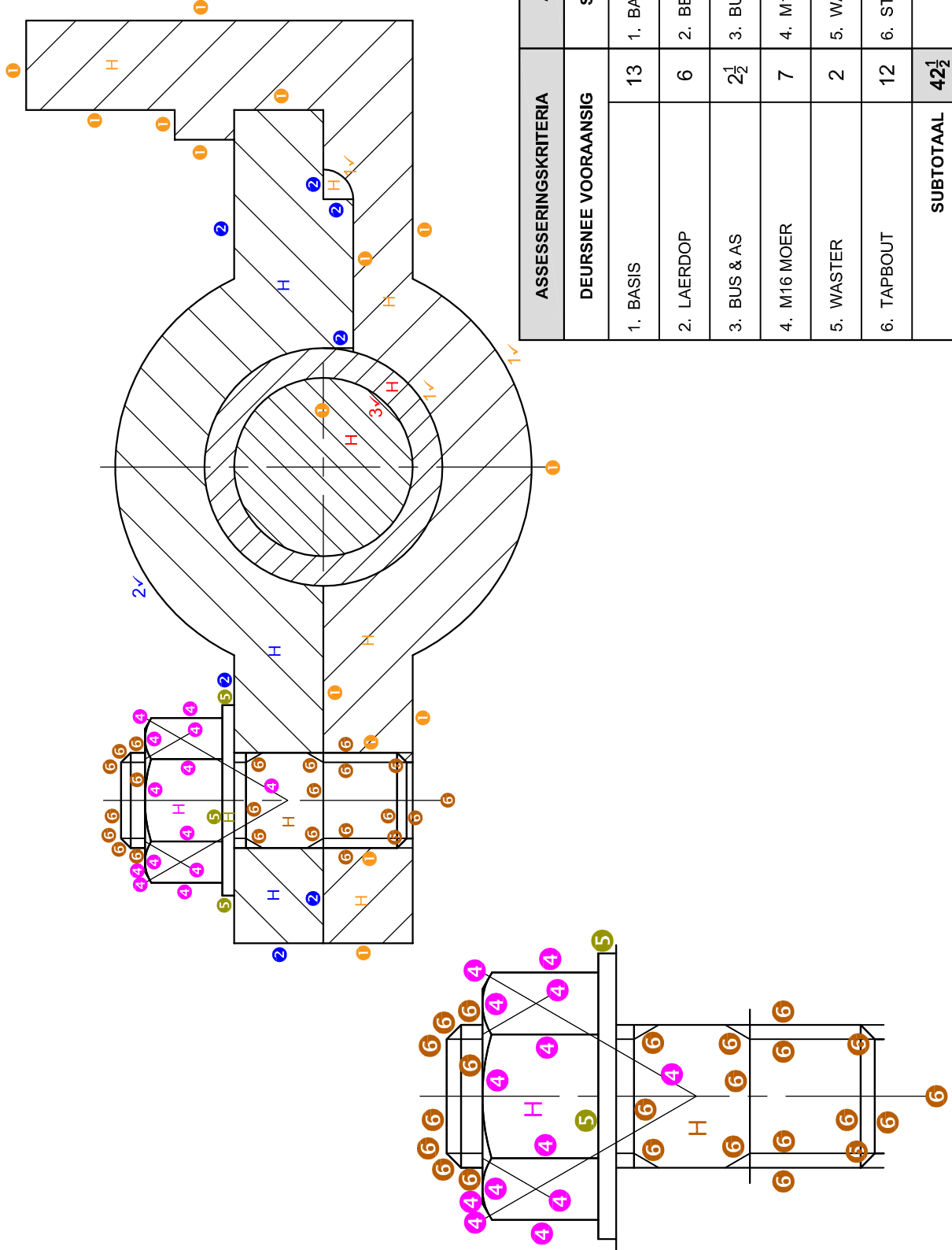


B 1✓

ASSESSMENT CRITERIA		ASSESSERINGSKRITERIA	
1. AUX. VIEW + PLACING	3	1. HULPAANSIG + PLASING	3
2. ISO' & NON ISO LINES	24½	2. ISO' & NIE-ISO' LYNE	24½
3. HEXAGON + CL	6½	3. SESKANT + SL	6½
4. ISO' CIRCLES + CL	8	4. ISO' SIRKEL + SL	8
<b>TOTAL</b>	<b>42</b>	<b>TOTAAL</b>	<b>42</b>

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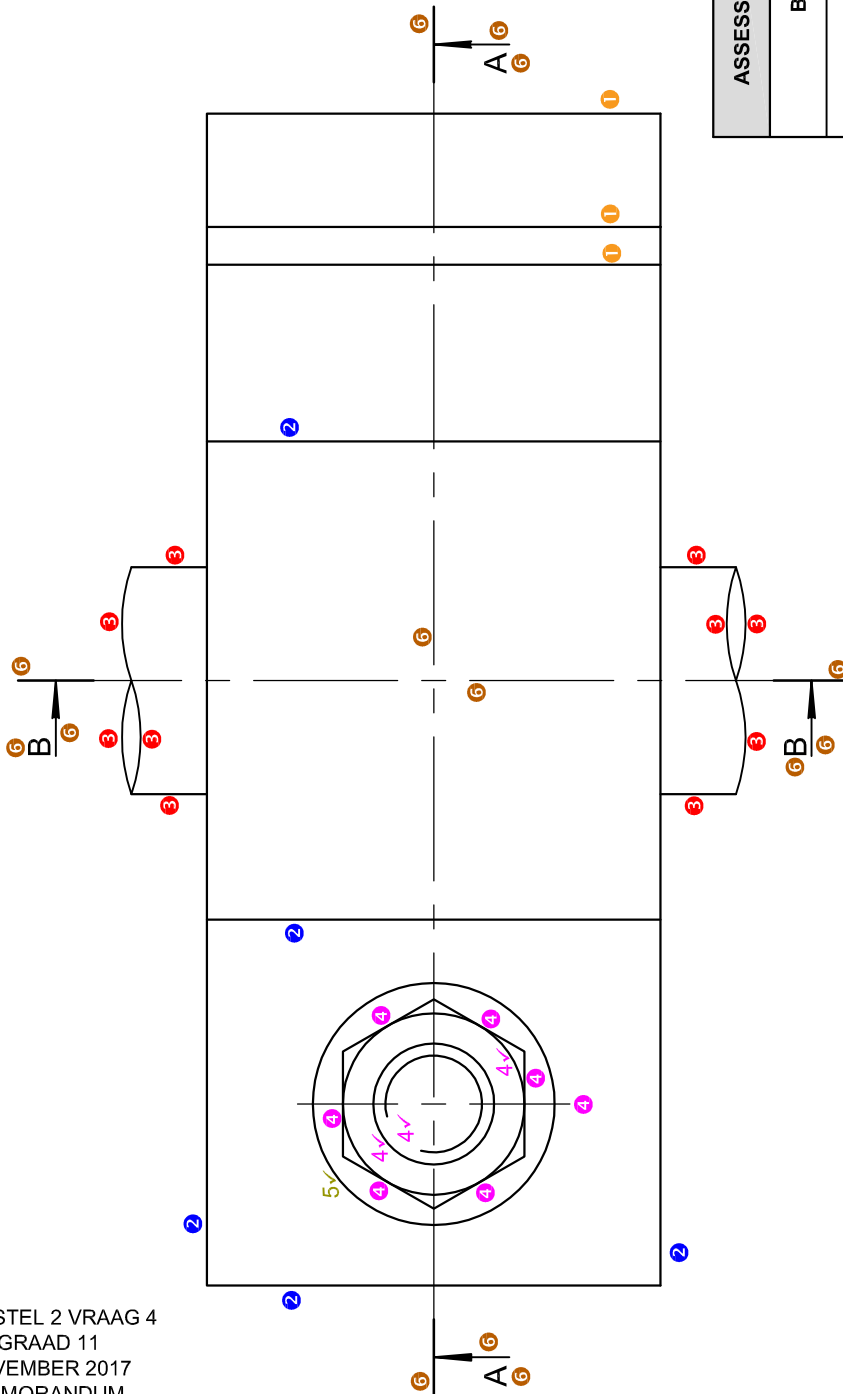
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ASSESSERINGSKRITERIA		ASSESSMENT CRITERIA	
DEURSNEE VOORAANSIG		SECTIONAL FRONT VIEW	
1. BASIS	13	1. BASE	13
2. LAERDOP	6	2. BEARING CAP	6
3. BUS & AS	2½	3. BUSH & SHAFT	2½
4. M16 MOER	7	4. M16 NUT	7
5. WASTER	2	5. WASHER	2
6. TAPBOU	12	6. STUD	12
<b>SUBTOTAAL</b>	<b>42½</b>	<b>SUB TOTAL</b>	<b>42½</b>

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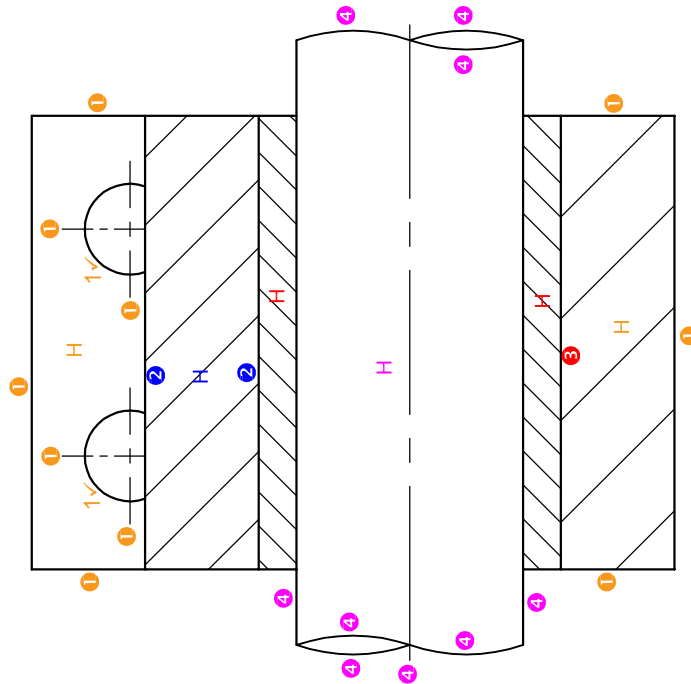
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ASSESSERINGSKRITERIA		ASSESSMENT CRITERIA	
BO-AANSIG		TOP VIEW	
1. BASIS	1½	1. BASE	1½
2. LAERDOP	2½	2. BEARING CAP	2½
3. AS	5	3. SHAFT	5
4. M16 MOER EN TAPBOUT	6½	4. M16 NUT & STUD	6½
5. WASTER	1	5. WASHER	1
6. SNYVLAK	7	6. CUTTING PLANE	7
<b>SUBTOTAAL</b>	<b>23½</b>	<b>SUB TOTAL</b>	<b>23½</b>

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ASSESSERINGSKRITERIA		ASSESSMENT CRITERIA	
DEURSNEE LINKERAANSIG		SECTIONAL LEFT VIEW	
1. BASIS	8	1. BASE	8
2. LAERDOP	1 1/2	2. BEARING CAP	1 1/2
3. LAER	1 1/2	3. BEARING	1 1/2
4. AS	5	4. SHAFT	5
SAMESTELLING	6	ASSEMBLY	6
DERDE HOEKSE PROJ	2	3rd ANGLE PROJ	2
<b>SUBTOTAAL</b>	<b>24</b>	<b>SUB TOTAL</b>	<b>24</b>