



# basic education

Department:  
Basic Education  
**REPUBLIC OF SOUTH AFRICA**

## **NATIONAL SENIOR CERTIFICATE**

**GRADE 12**

**ENGINEERING GRAPHICS AND DESIGN P2**

**NOVEMBER 2013**

**MEMORANDUM**

**MARKS: 100**

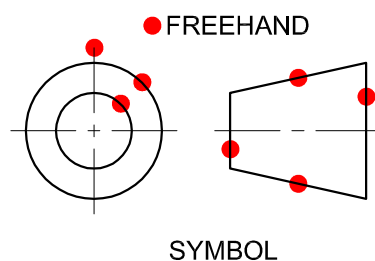
**This memorandum consists of 7 pages.**

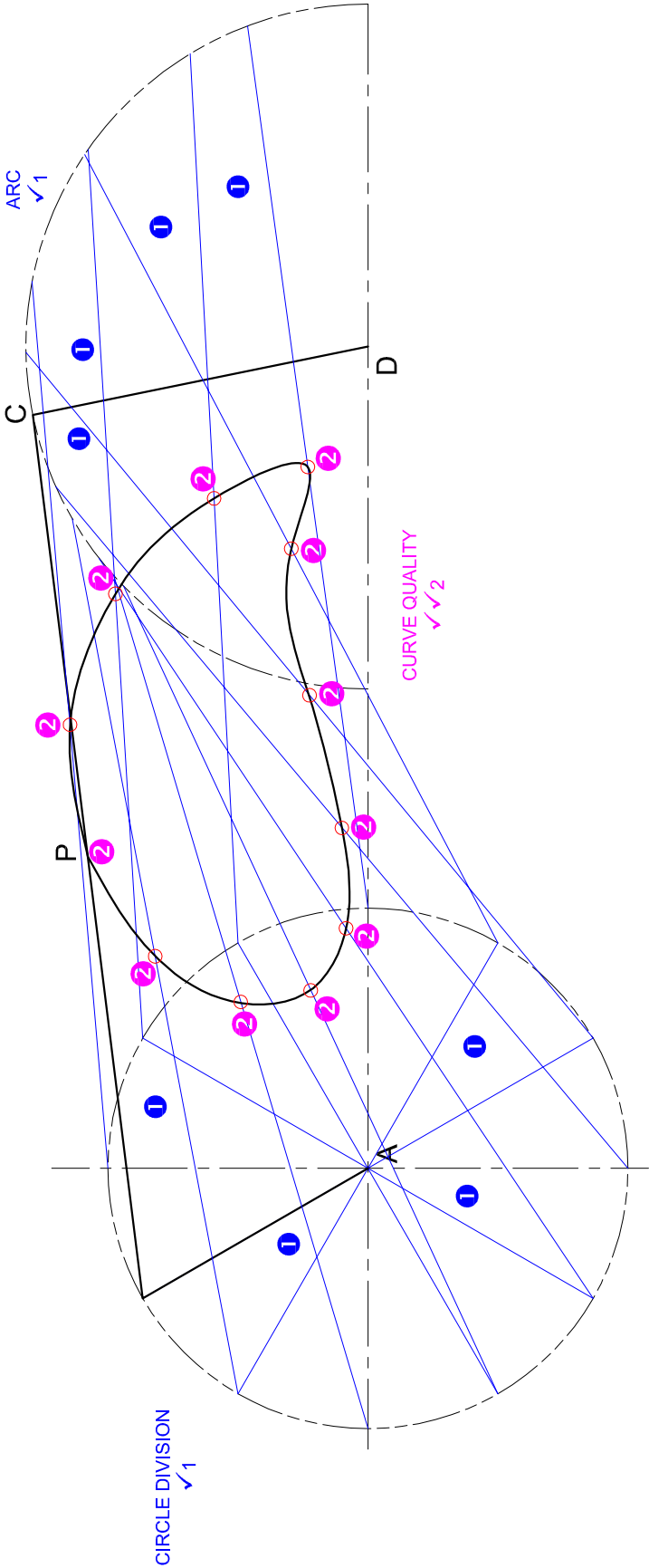
## ANSWERS

1	2013/05/12	1
2	PRECISION ENGINEERING	1
3	1 : 2	1
4	HARDENING	1
5	2013/05/15	1
6	AWF 3628 W	1
7	FRONT VIEW	1
8	17	1
9	4	1
10	TURNING	1
11	PART SECTION	1
12	(SCREW/EXTERNAL) THREAD	1
13	FILLET	1
14	4 mm	1
15	BLIND THREADED HOLE	2
16	INTERPENETRATION	2
17	100°	2
18	2 mm	2
19	A Ø10 B 60 C M16 D 8	4
20	(See below.)	4

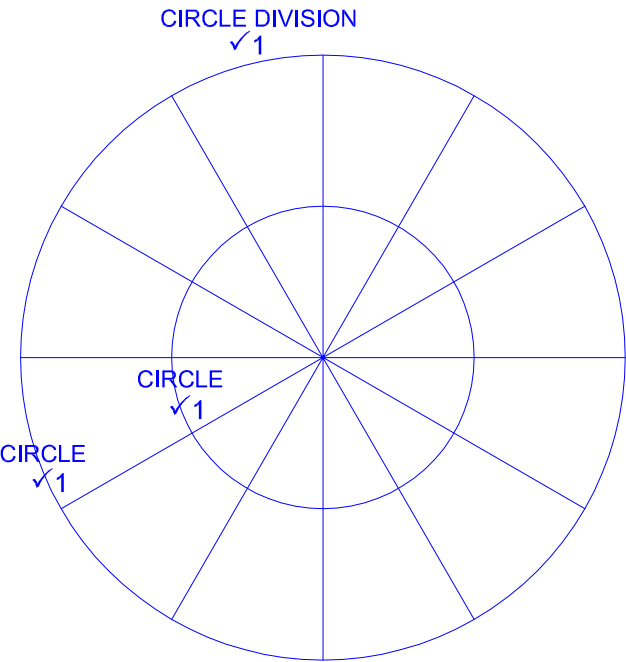
TOTAL: 30

20

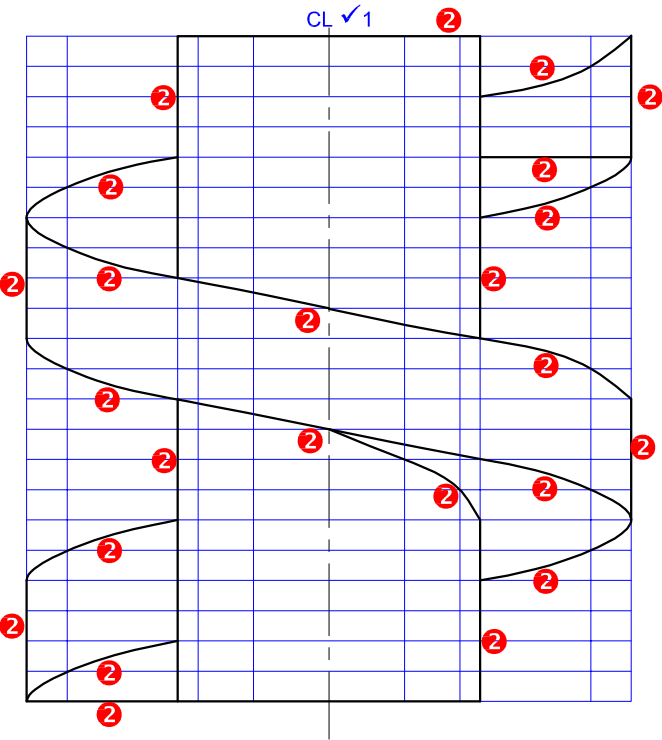




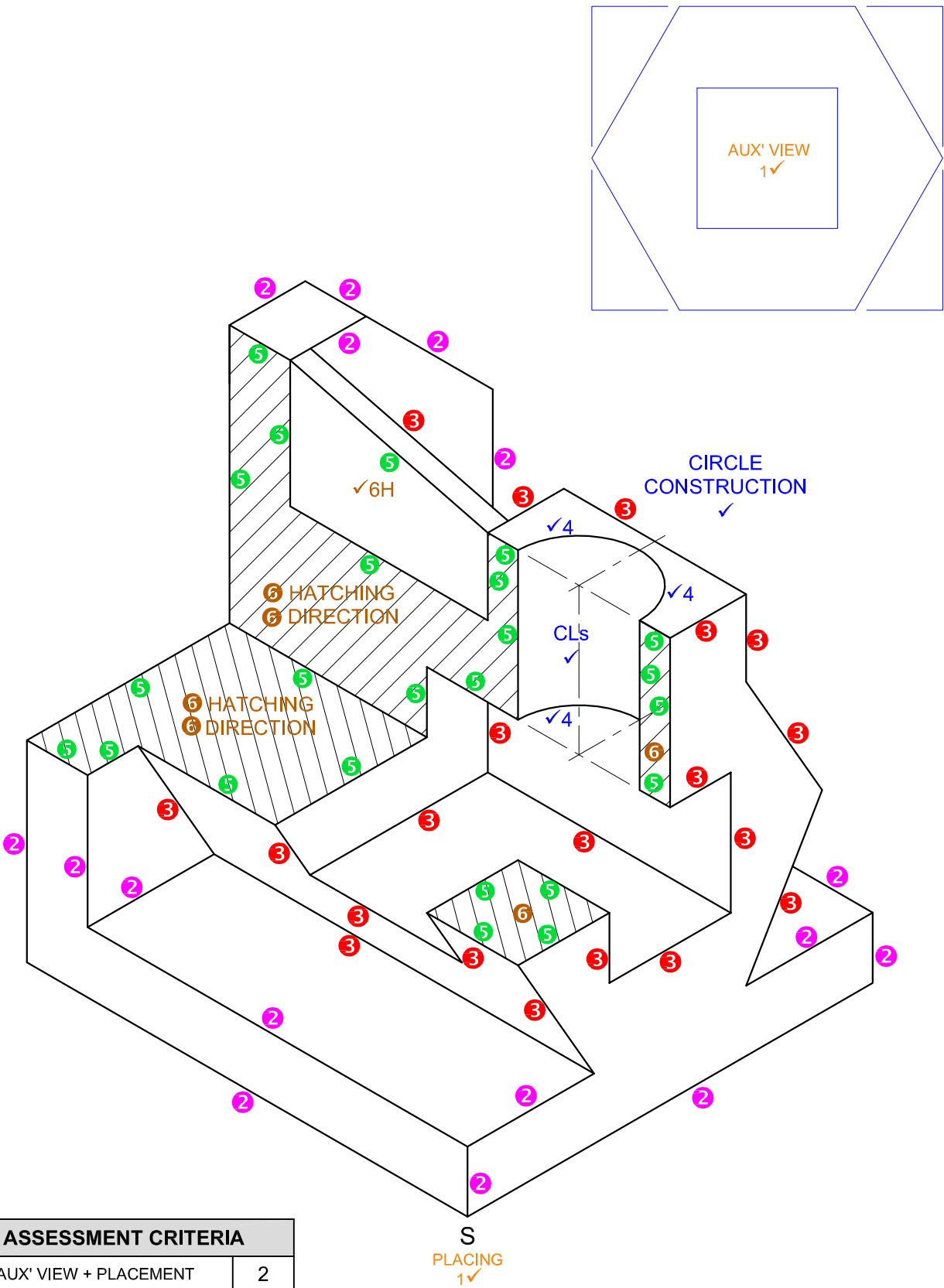
ASSESSMENT CRITERIA		
1	CONSTRUCTION	6
2	LOCUS OF P	8
SUBTOTAL		14



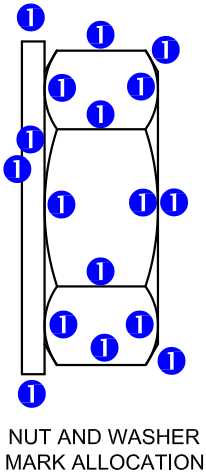
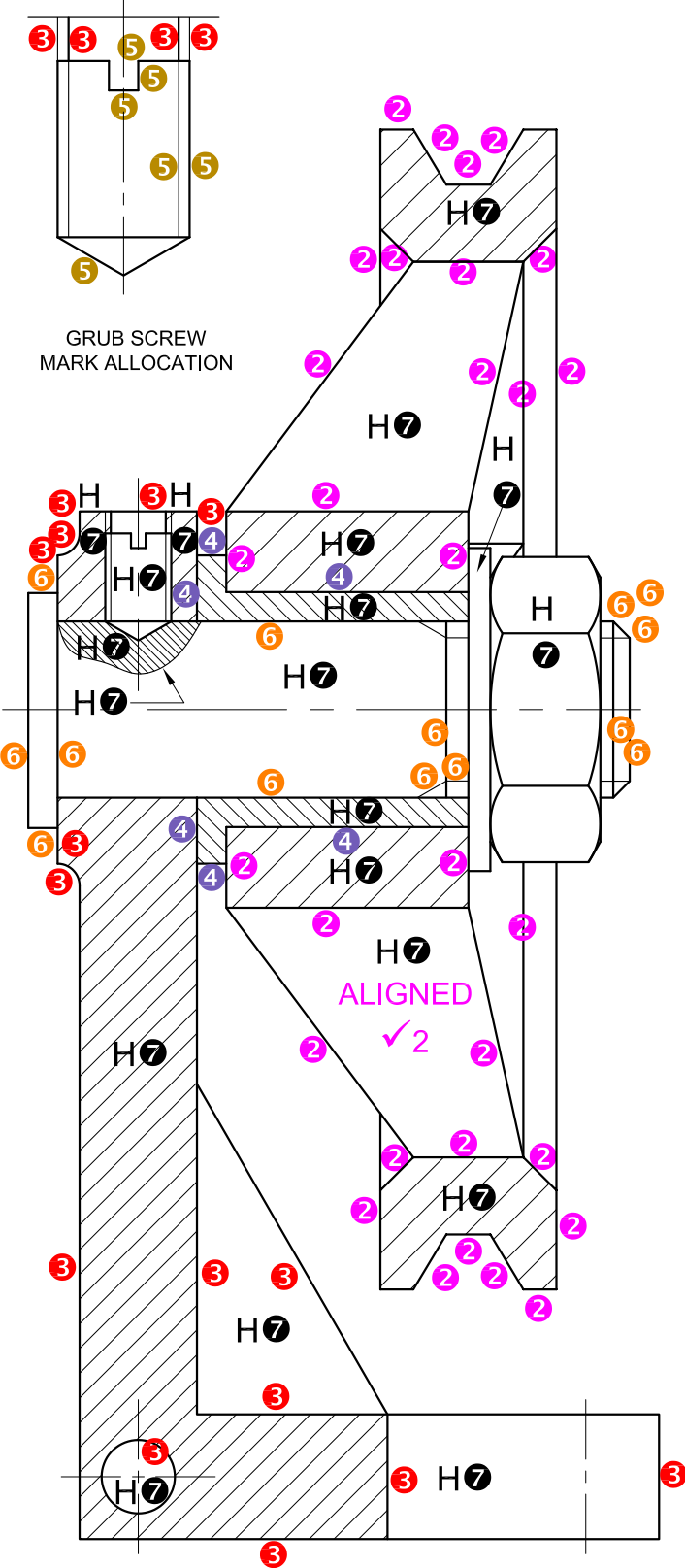
PITCH ✓1  
HORIZONTAL DIVISION ✓1  
VERTICAL PROJECTION ✓1  
LEFT HAND ✓1



ASSESSMENT CRITERIA		
1	CL + CONSTRUCTION	8
2	CHUTE	12
SUBTOTAL		20

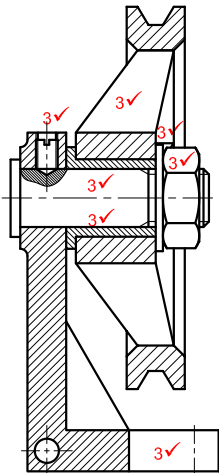
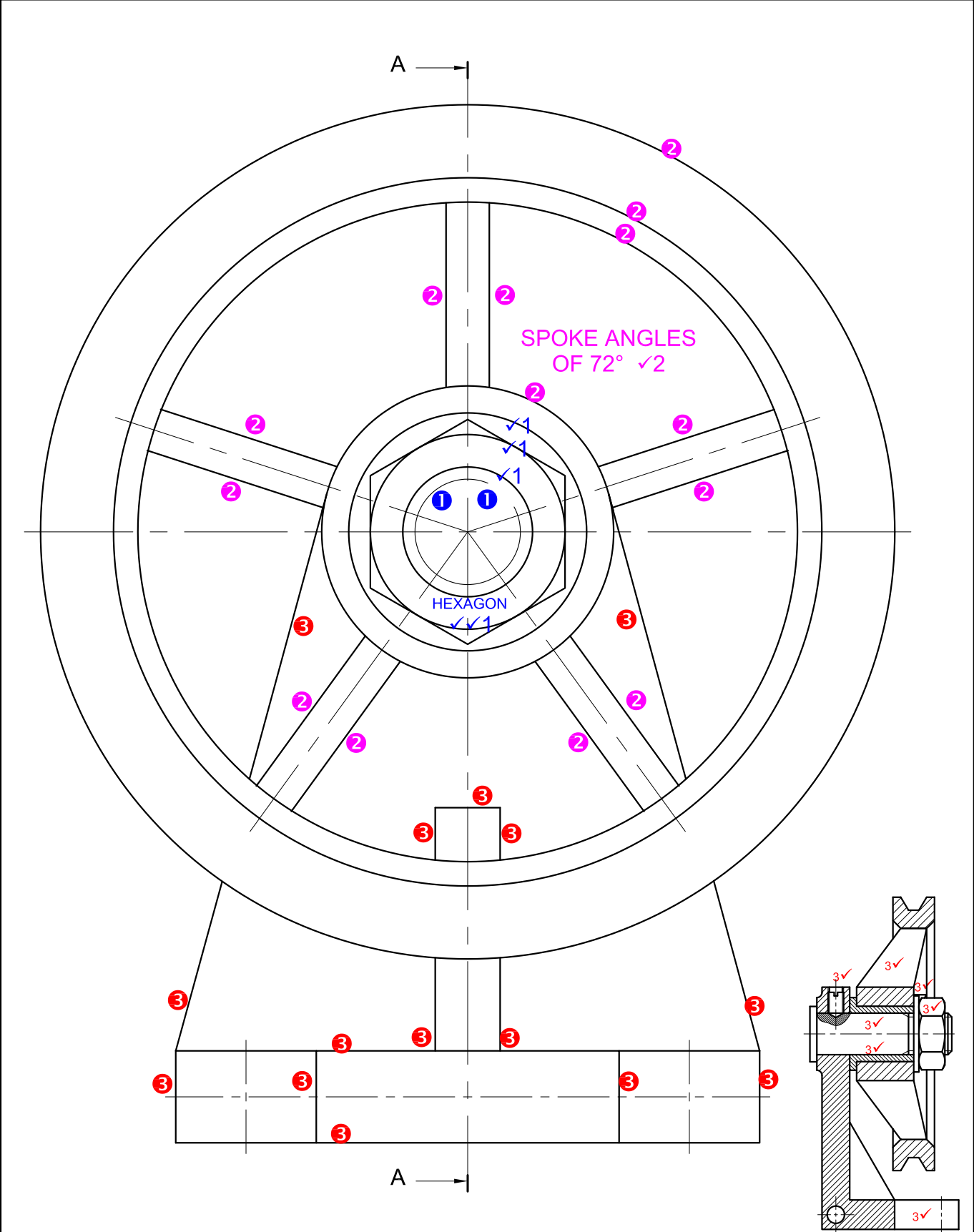


ASSESSMENT CRITERIA		
1	AUX' VIEW + PLACEMENT	2
2	BASE	8
3	HEXAGONAL PRISM	10
4	CIRCLES	5
5	SECTION	12
6	HATCHING	4
	<b>TOTAL</b>	<b>41</b>



SECTION A-A 3

SECTIONAL FRONT VIEW		
1	M24 NUT + WASHER	8½
2	PULLEY	16
3	BRACKET	9½
4	BUSH	3
5	GRUB SCREW	3
6	SHAFT	7
7	HATCHING	10
SUBTOTAL		57



1 MARK FOR EACH  
COMPONENT  
CORRECTLY  
ASSEMBLED  
(7 PARTS -1 = 6)

RIGHT VIEW		
1	M24 NUT + WASHER	6
2	PULLEY	8
3	BRACKET	7½
SUBTOTAL		21½

GENERAL		
1	CENTRE LINES	7
2	CUTTING PLANE + LABEL	3½
3	ASSEMBLY	6
SUBTOTAL		16½

PAPER 2 QUESTION 4  
GRADE 12  
November 2013  
MEMORANDUM