



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

NATIONAL SENIOR CERTIFICATE

GRADE 12

ENGINEERING GRAPHICS AND DESIGN P2
NOVEMBER 2011
MEMORANDUM

MARKS: 100

This memorandum consists of 6 pages.

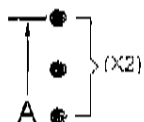
DEPARTMENT OF BASIC EDUCATION
2011 -11- 10 PRIVATE BAG X 110 PRETORIA 0001
PUBLIC EXAMINATIONS

S.C. de Bruin
S.C. DE BRUIN (IM)

M.P. Moorley
M.P. MOORLEY (EM)

ANSWERS		
1	2011/07/24	1/2
2	A MOKOENA	1/2
3	SCALE 1 : 2	1/2
4	N BOOTH	1/2
5	3	1/2
6	REMOVE WASHER	1/2
7	4	1
8	0,8	1
9	THREAD/SCREW THREAD	1
10	THREADED PIN	1
11	CIRCLE/CYLINDRICAL	1
12	FULL SECTION/REMOVED SECTION	1
13	M73	1
14	8	1
15	RIGHT VIEW	1
16	A. A/F97 B. A/F79 C. 16 D. 30 E. Ø50	5
17		3
18		2
19		4
20		4

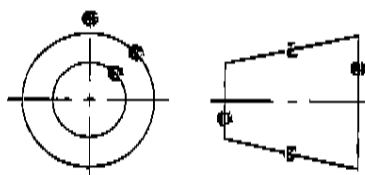
ANSWER 17



TOTAL: 30

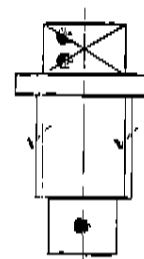
ANSWER 19

● FREEHAND



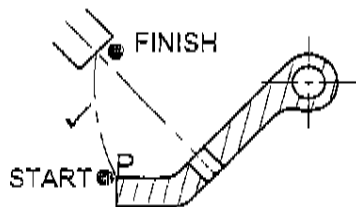
SYMBOL

ANSWER 20



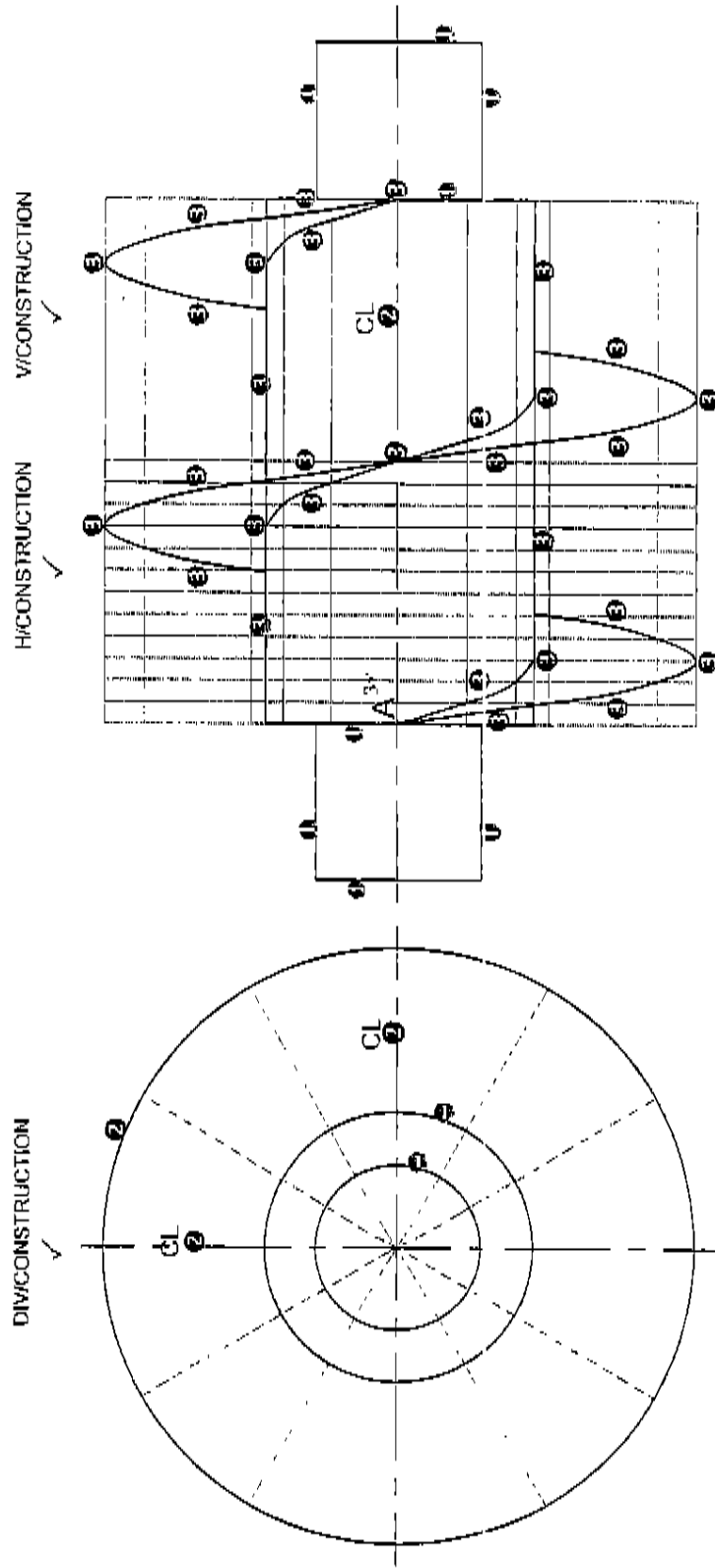
● FREEHAND

ANSWER 18



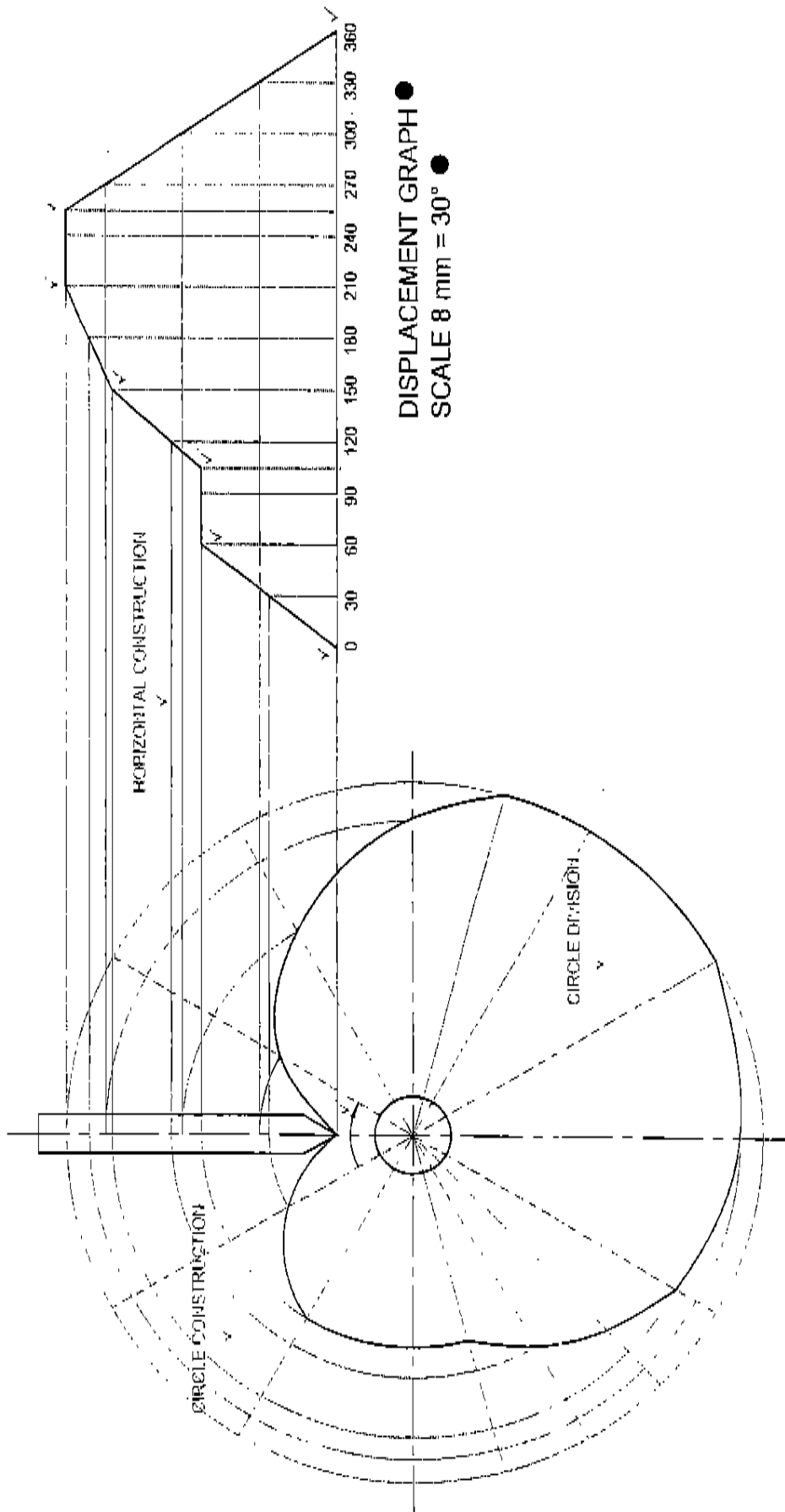
PAPER 2 QUESTION 1
GRADE 12
NOVEMBER 2011
MEMORANDUM

RIGHT-HAND TURN ✓



ASSESSMENT CRITERIA	
1. GIVEN	5
2. CENTRE LINES + CONSTR	5
3. HELIX/AUGER	17
SUBTOTAL	27

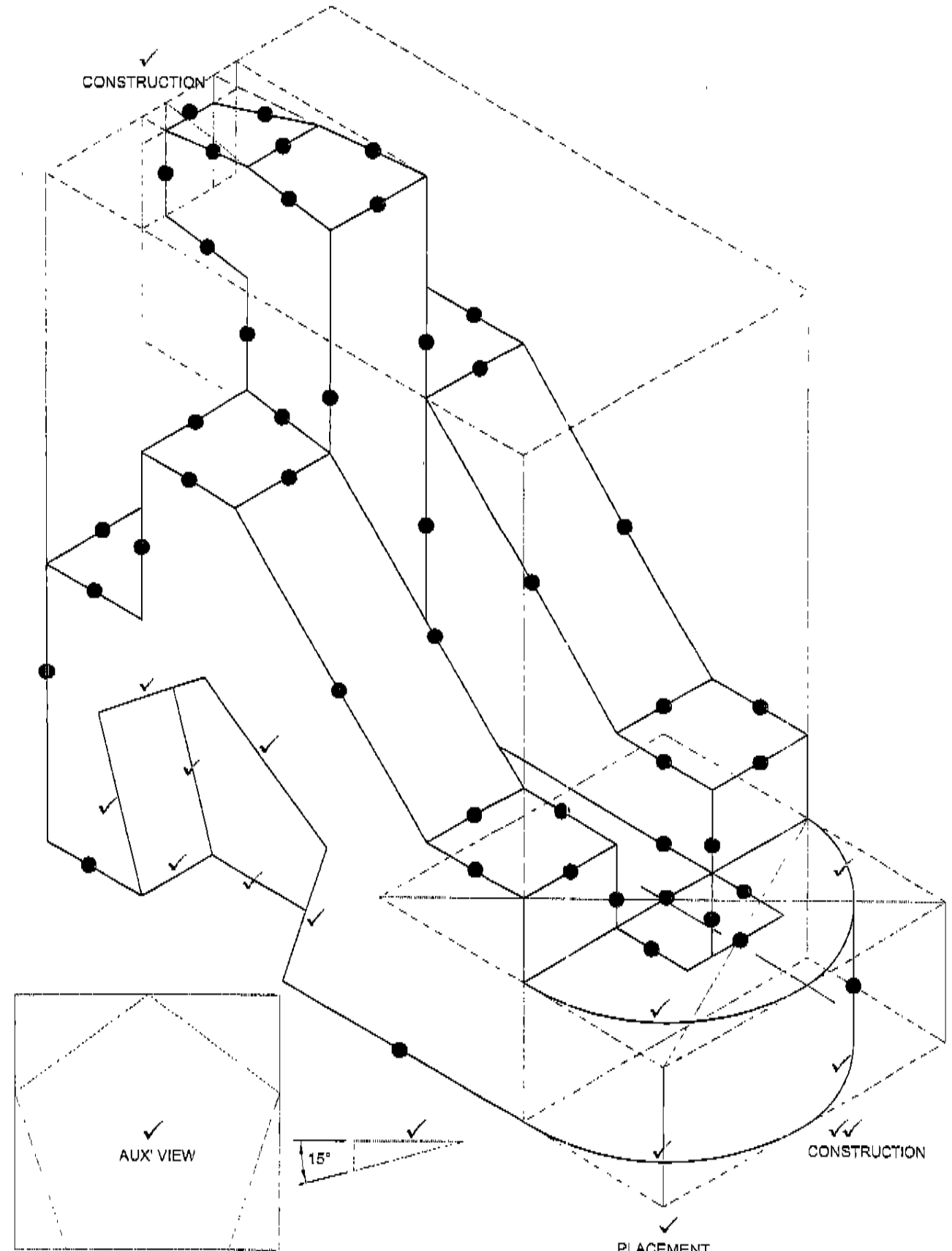
PAPER 2 QUESTION 2.1
 GRADE 12
 NOVEMBER 2011
 MEMORANDUM




DISPLACEMENT GRAPH ●
 SCALE 8 mm = 30° ●

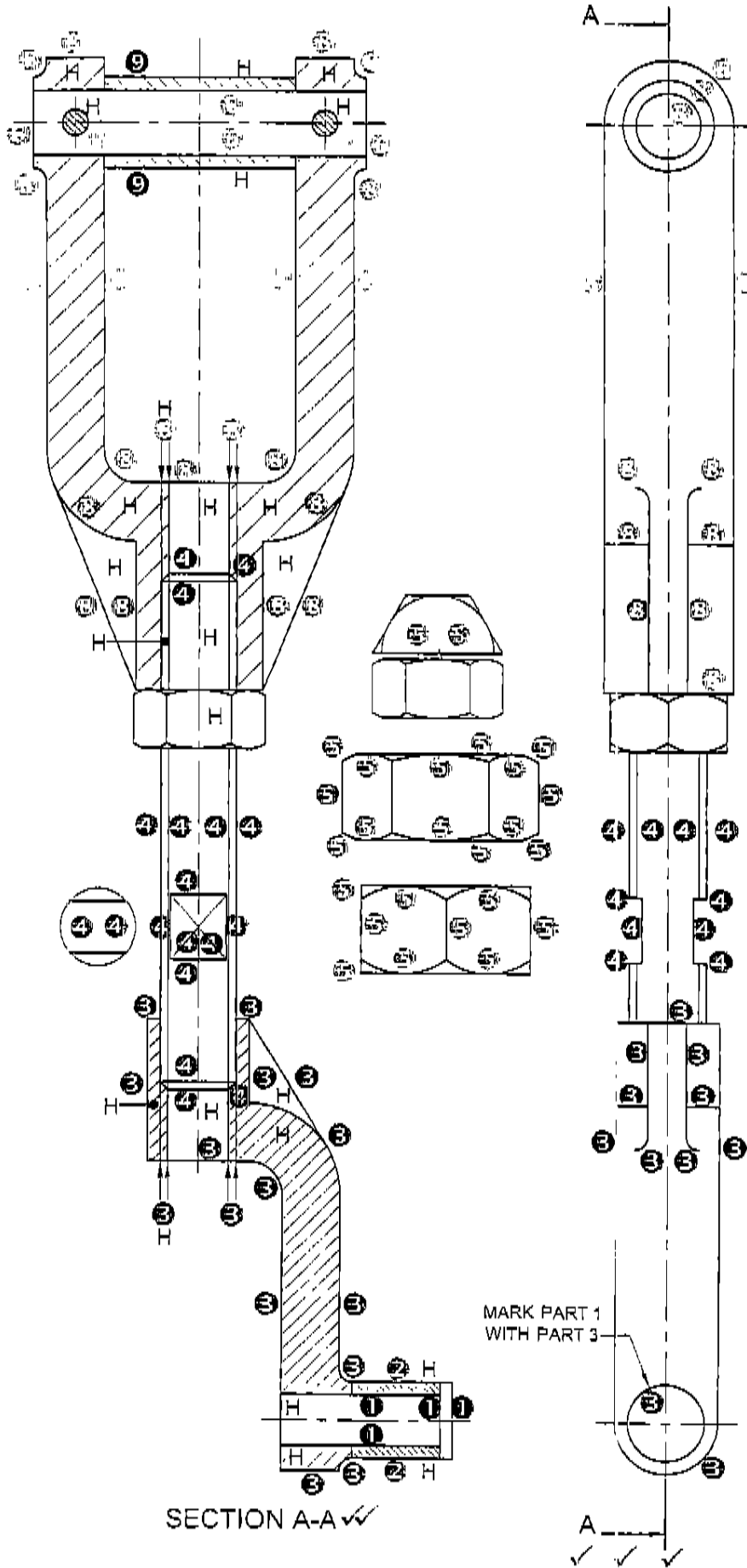
ASSESSMENT CRITERIA	
DISPLACEMENT GRAPH	7
CONSTRUCTION	3
LABELS + ARROW	2
SUBTOTAL	12
TOTAL	39

PAPER 2 QUESTION 2.2
 GRADE 12
 NOVEMBER 2011
 MEMORANDUM

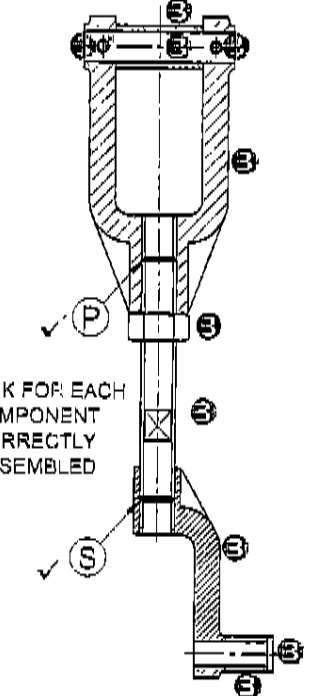


ASSESSMENT CRITERIA	
AUXILIARY VIEWS + CIRCLE CONSTRUCTION + PLACE	6
ISO' ARCS + PENTAGONAL HOLE	11
ISO' + NON-ISO' LINES	23
TOTAL	40


 PAPER 2 QUESTION 3
 GRADE 12
 NOVEMBER 2011
 MEMORANDUM



SECTIONAL FRONT VIEW		
1	SHAFT A	2
2	BUSH A	1
3	OFFSET ARM	7½
4	TIE ROD	9
5	M12 NUT	8
6	SHAFT B	2
7	DOWEL	1
8	FORK	10½
9	BUSH B	1
H	HATCHING	12
SUBTOTAL		54
RIGHT VIEW		
3	OFFSET ARM	5½
4	TIE ROD	5
5	M12 NUT	4½
8	FORK	6
SUBTOTAL		21
GENERAL		
1	CENTRE LINES	4
2	CUTTING PLANE + TITLE	5
3	ASSEMBLY	7
SUBTOTAL		16
TOTAL		91



1/2 MARK FOR EACH COMPONENT CORRECTLY ASSEMBLED

PAPER 2 QUESTION 4
 GRADE 12
 NOVEMBER 2011
 MEMORANDUM