



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

**NATIONAL
SENIOR CERTIFICATE**

GRADE 12

ENGINEERING GRAPHICS AND DESIGN P2

NOVEMBER 2012

MEMORANDUM

MARKS: 100

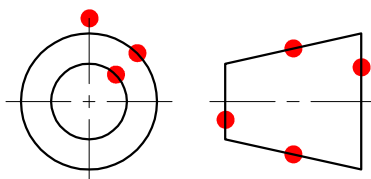
This memorandum consists of 7 pages.

ANSWERS		
1	J BURGER	½
2	mm	½
3	2012-07-18	½
4	S GOBA	½
5	CAD	½
6	382	½
7	4	1
8	0,03	1
9	GRINDING	1
10	105°/75°	1
11	44°	1
12	6	1
13	COUNTER-BORE	1
14	FRONT VIEW	1
15	R6	1
16	A. 19 ± 0,05 B. 22 C. Ø30 D. 60 E. 24	5
17	253	3
18	19,05	2
19	187,35 (UPPER) & 186,55 (LOWER)	4
20		4

TOTAL: 30

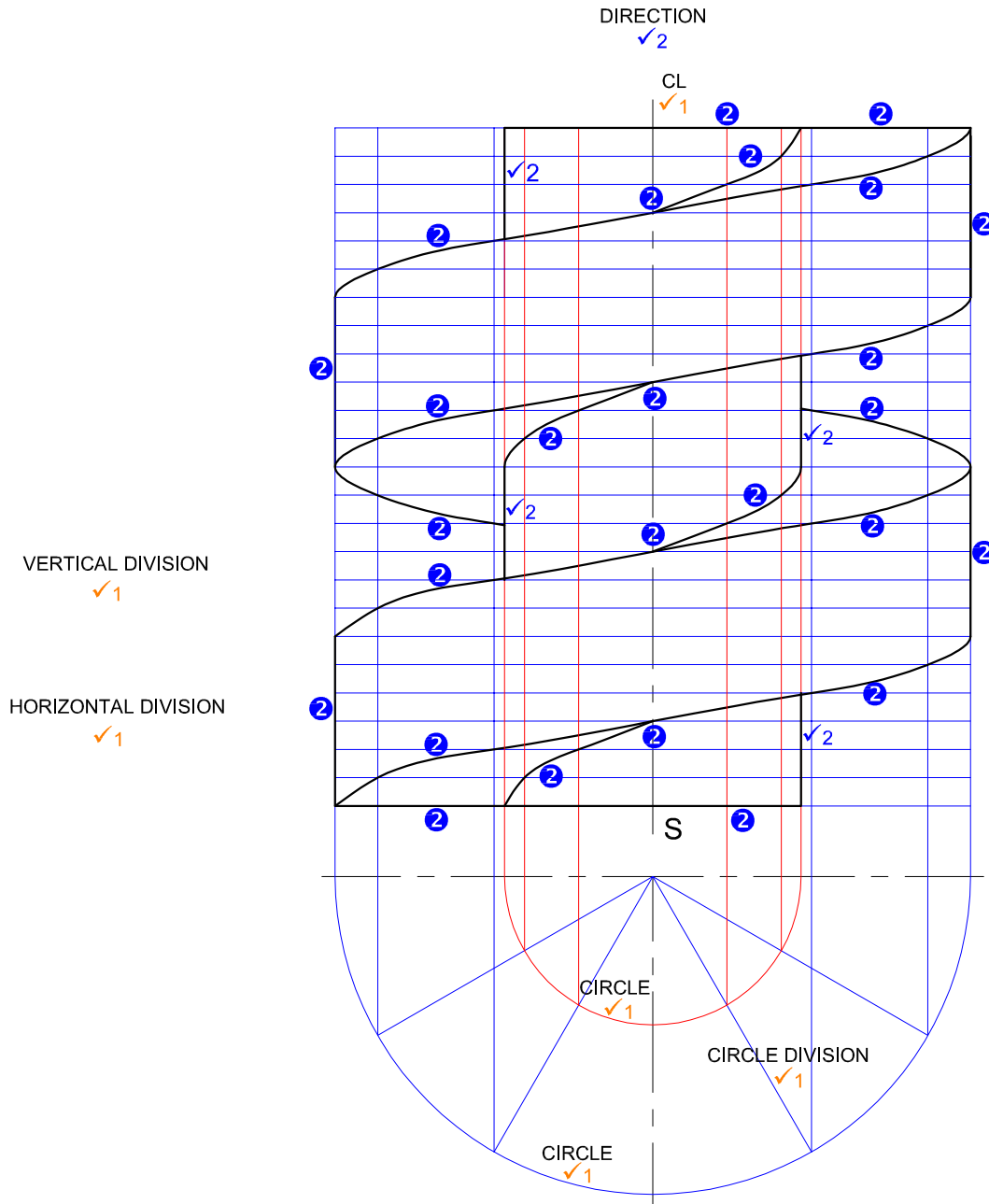
ANSWER 20

● **FREEHAND**



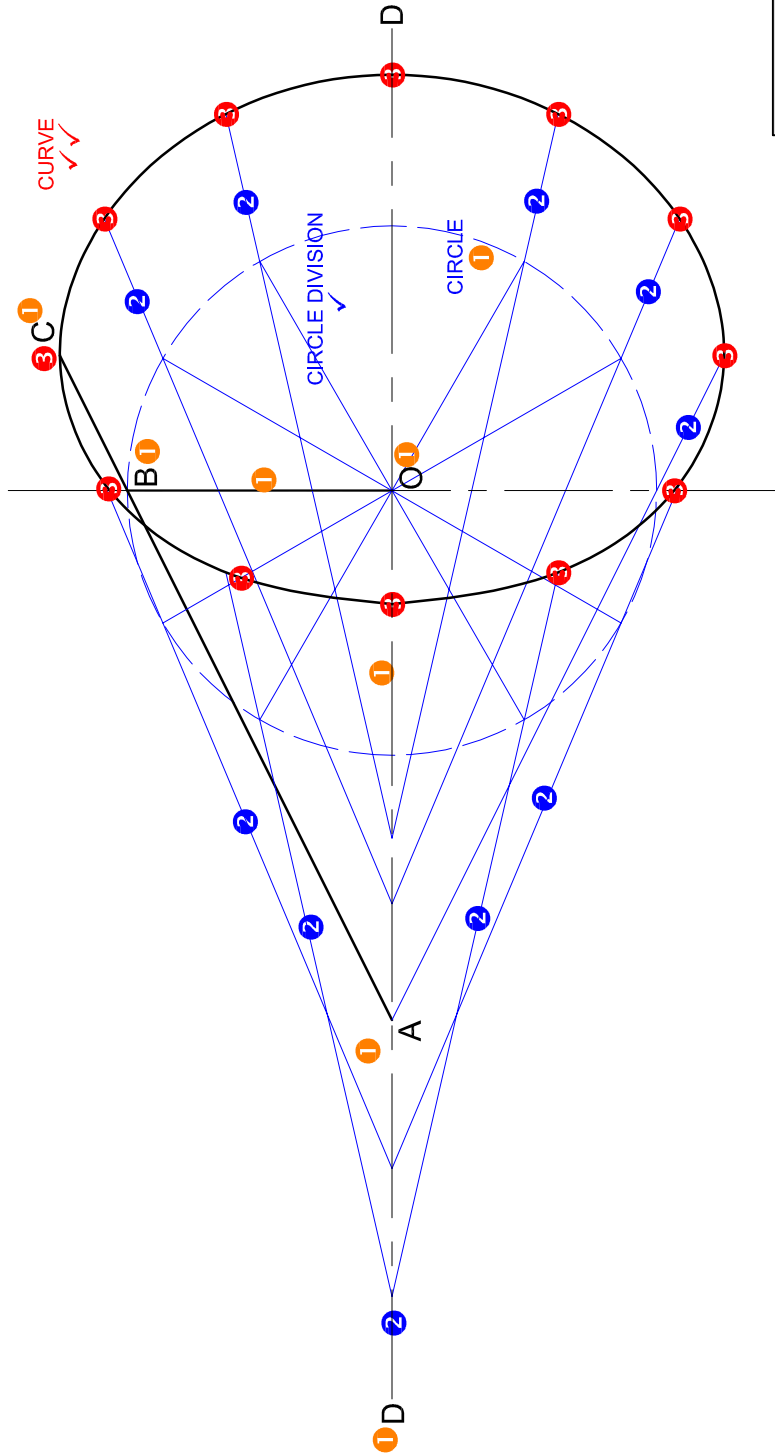
SYMBOL

PAPER 2 QUESTION 1
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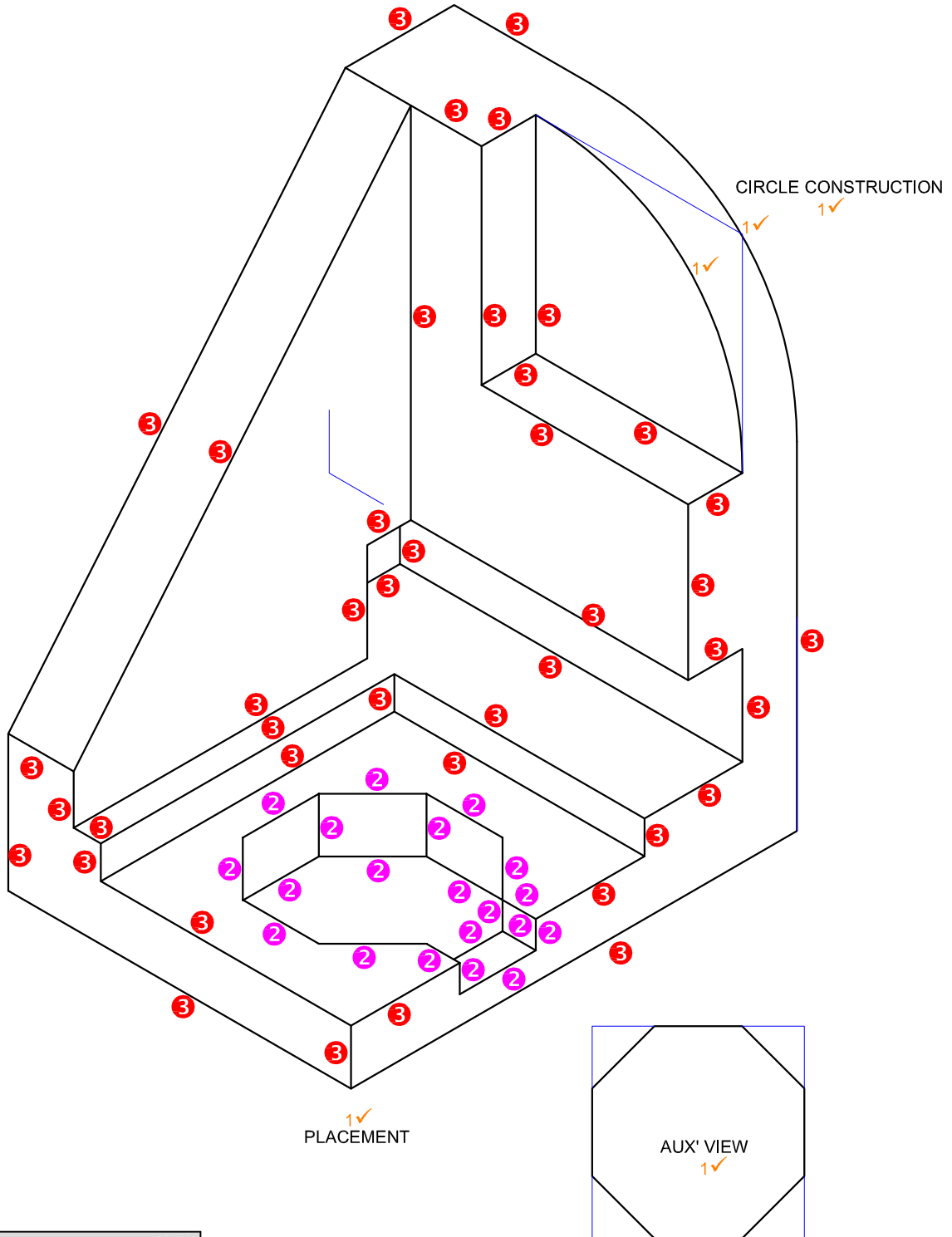
ASSESSMENT CRITERIA		
1	CENTRE LINES + CONSTR'	6
2	HELICES + SHAFT + DIRECTION	18
SUBTOTAL		24

PAPER 2 QUESTION 2.1
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ASSESSMENT CRITERIA		
1	GIVEN	4
2	CONSTRUCTION	6
3	LOCUS + CURVE	8
SUBTOTAL		18
TOTAL		42

PAPER 2 QUESTION 2.2
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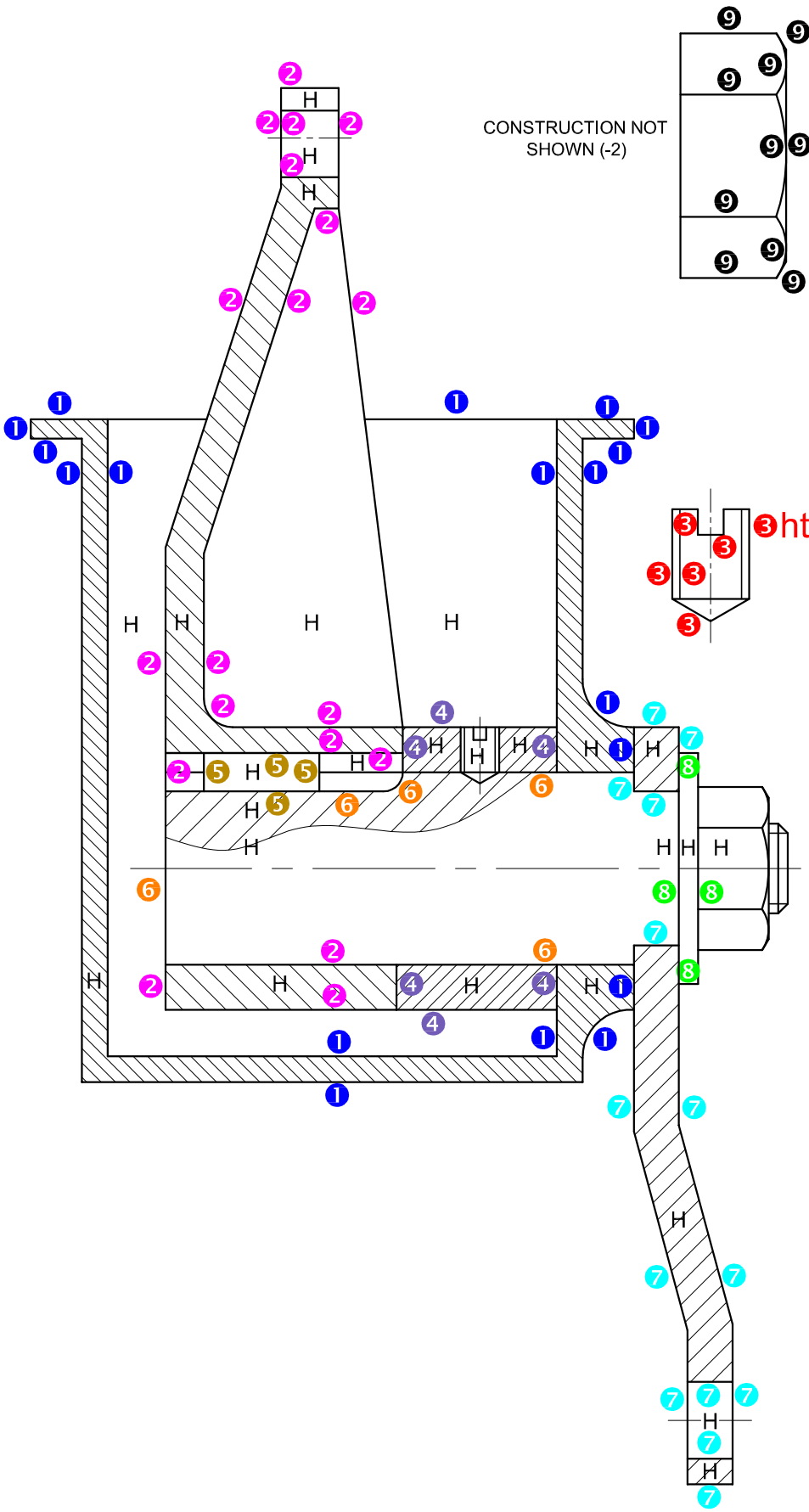


ASSESSMENT CRITERIA		
1	AUX' VIEWS + CIRCLE + CONSTR' + PLACE	5
2	OCTAGONAL HOLE	10
3	ISO' + NON-ISO' LINES	21
TOTAL		36

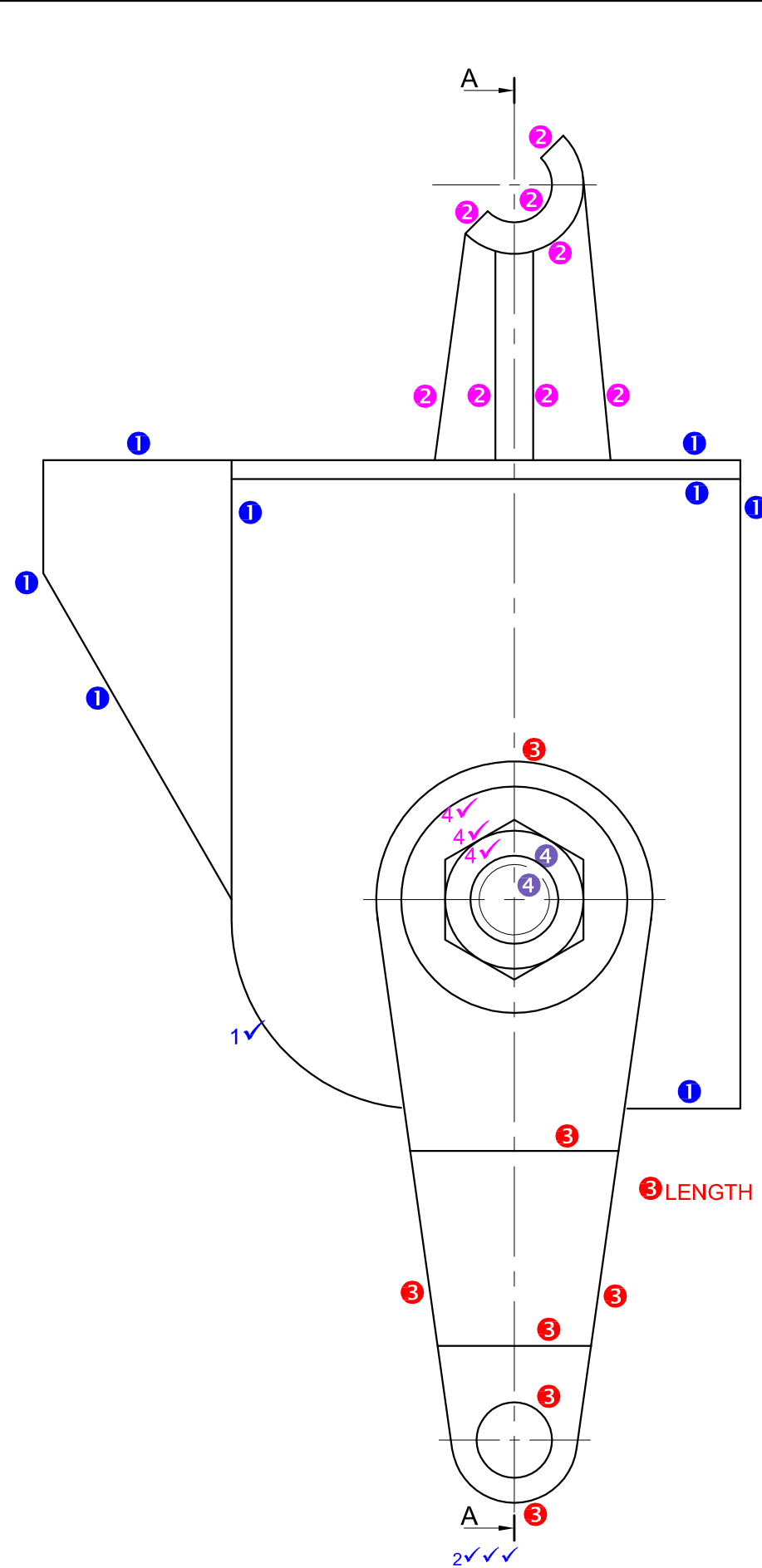
PAPER 2 QUESTION 3
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SECTIONAL FRONT VIEW

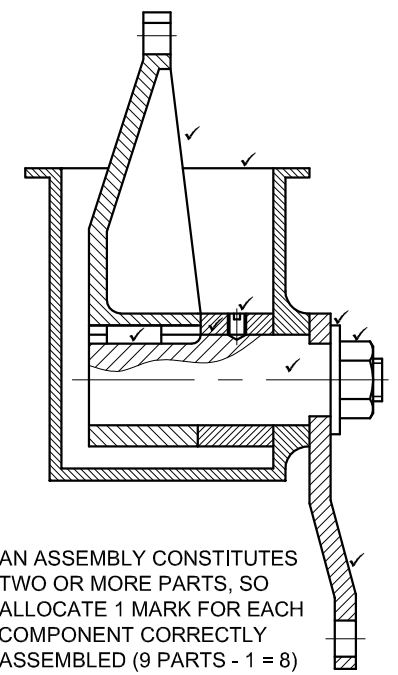
1	HOUSING	9
2	RELEASE ARM	9½
3	GRUB SCREW	3
4	SPACER	3
5	KEY	2
6	SHAFT	6½
7	LEVER	7
8	WASHER	2
9	M14 NUT	5
H	HATCHING	13
SUBTOTAL		60



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RIGHT VIEW		
1	HOUSING	5
2	RELEASE ARM	4
3	LEVER	4
4	WASHER + M14 NUT	4
SUBTOTAL		17
GENERAL		
1	CENTRE LINES	4
2	CUTTING PLANE	3
3	ASSEMBLY	8
SUBTOTAL		15



AN ASSEMBLY CONSTITUTES TWO OR MORE PARTS, SO ALLOCATE 1 MARK FOR EACH COMPONENT CORRECTLY ASSEMBLED (9 PARTS - 1 = 8)

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