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basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

NATIONAL SENIOR CERTIFICATE

GRADE 12

ENGINEERING GRAPHICS AND DESIGN P1

NOVEMBER 2015

MEMORANDUM

MARKS: 100

This memorandum consists of 7 pages.

	ANSWERS	
1	AFSP-2015	1
2	2	1
3	1	1
4	MRS SCHUTTE	1
5	2015-02-13	1
6	2	1
7	INSPECTION CHAMBER	1
8	DIRECTION OF FLOW	1
9	TREE	1
10	RED	1
11	CONTOUR LINE	1
12	DEMOLISH/REMOVE	1
13	30,25 m	1
14	4 700 mm	1
15	3 m	2
16	SOUTH-WEST	2
17	ELECTRICAL SUBSTATION	2
18	72 m [calculation 1, answer 1, converted to metres 1]	3
19	248m ² [calculation 1, answer 1, metres ² 1]	3
20	See below	4

TOTAL 30

ANSWER 18
Show ALL calculations.

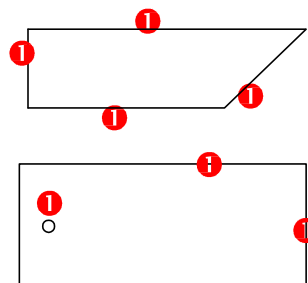
$$13 + 6 + 6 + 6 + 3 + 8 + 10 + 20 = 72 \text{ m}$$

ANSWER 19
Show ALL calculations.

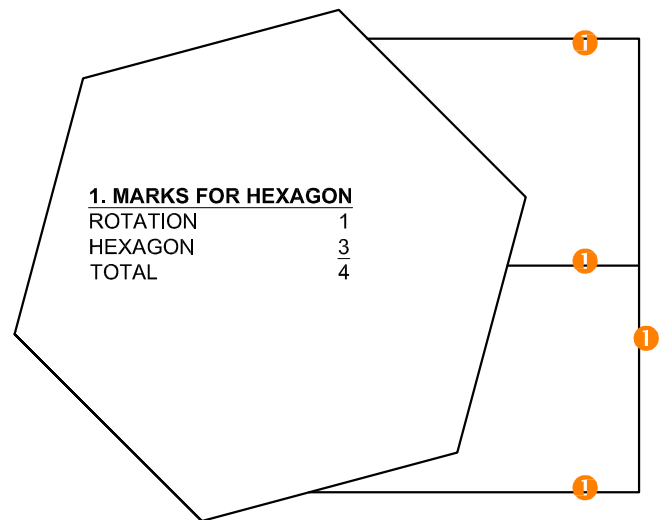
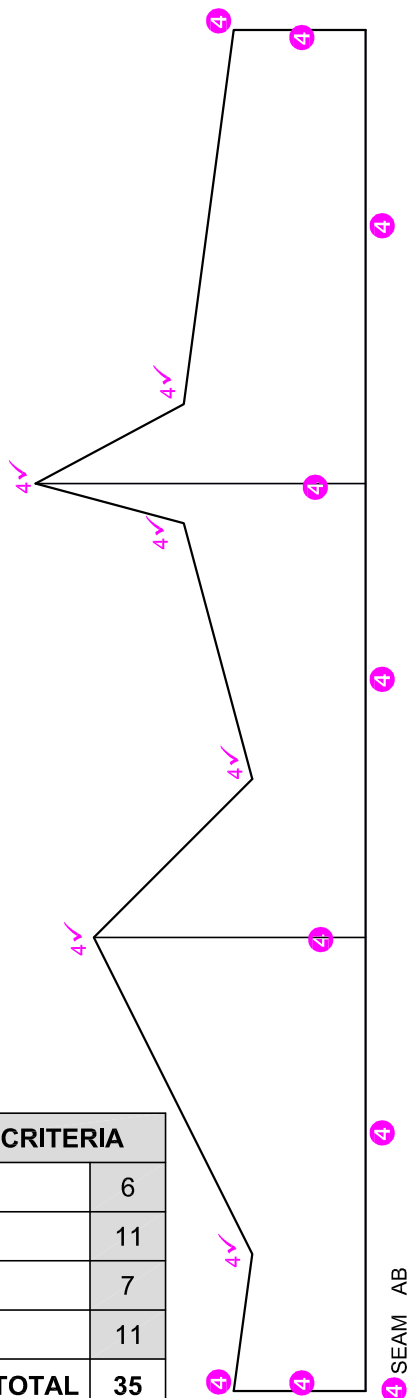
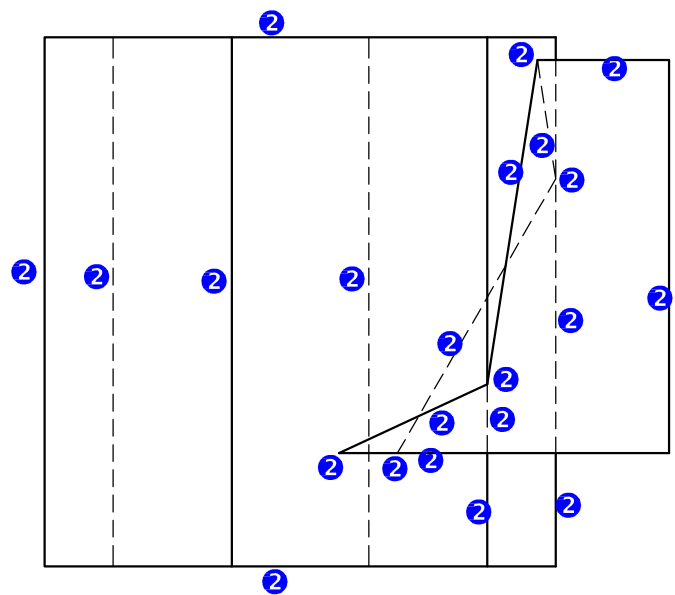
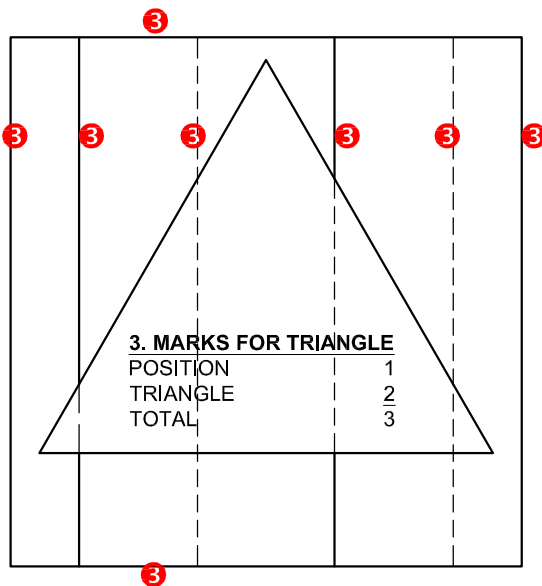
$$\begin{array}{rcl}
 13 \times 6 & = & 78 \\
 6 \times 7 & = & 42 \\
 10 \times 8 & = & 80 \\
 8 \times 6 & = & 48 \\
 \hline
 & & 248 \text{ m}^2
 \end{array}$$

20

FREEHAND ①



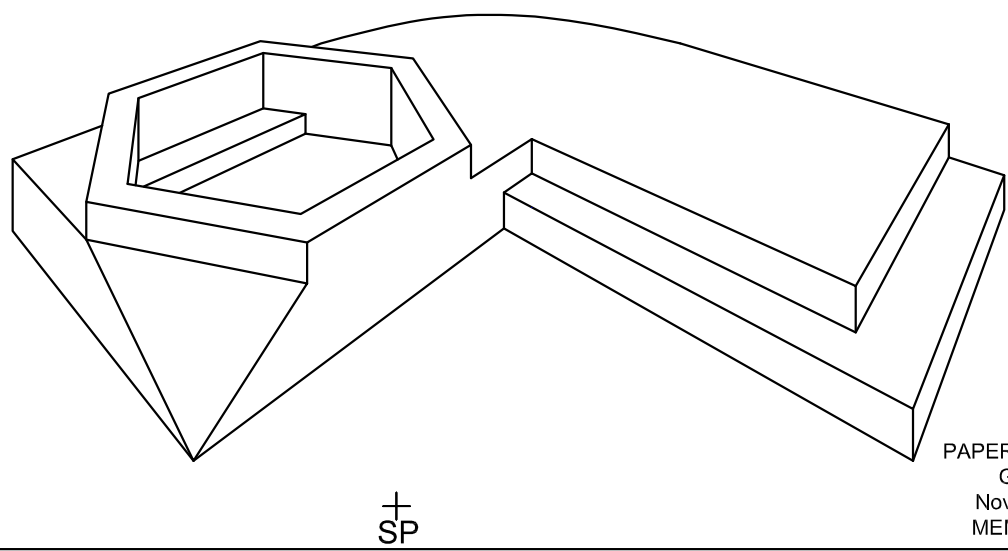
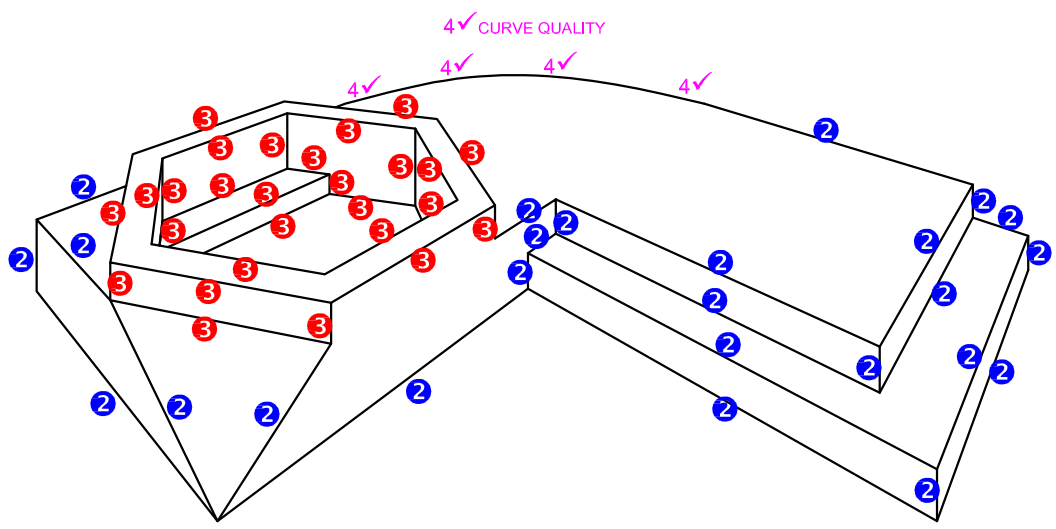
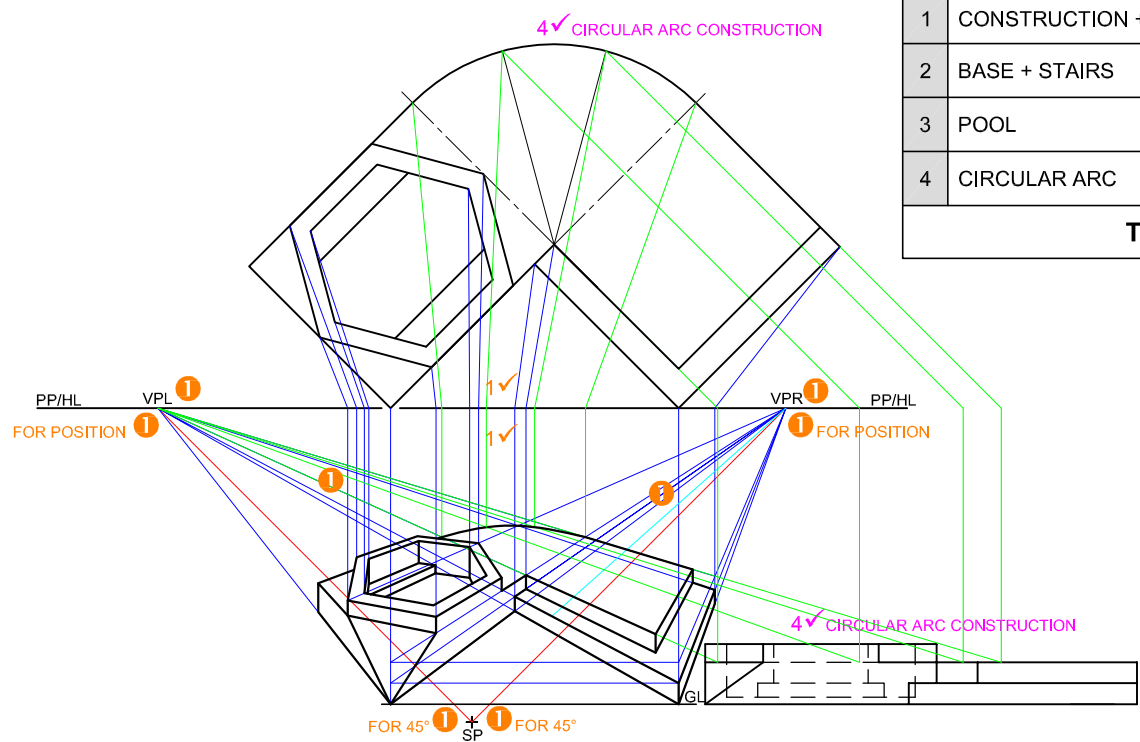
PAPER 1 QUESTION 1
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MEMORANDUM



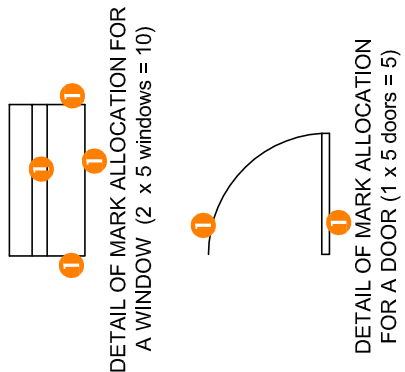
ASSESSMENT CRITERIA		
1	TOP VIEW	6
2	FRONT VIEW	11
3	RIGHT VIEW	7
4	DEVELOPMENT	11
TOTAL		35

PAPER 1 QUESTION 2
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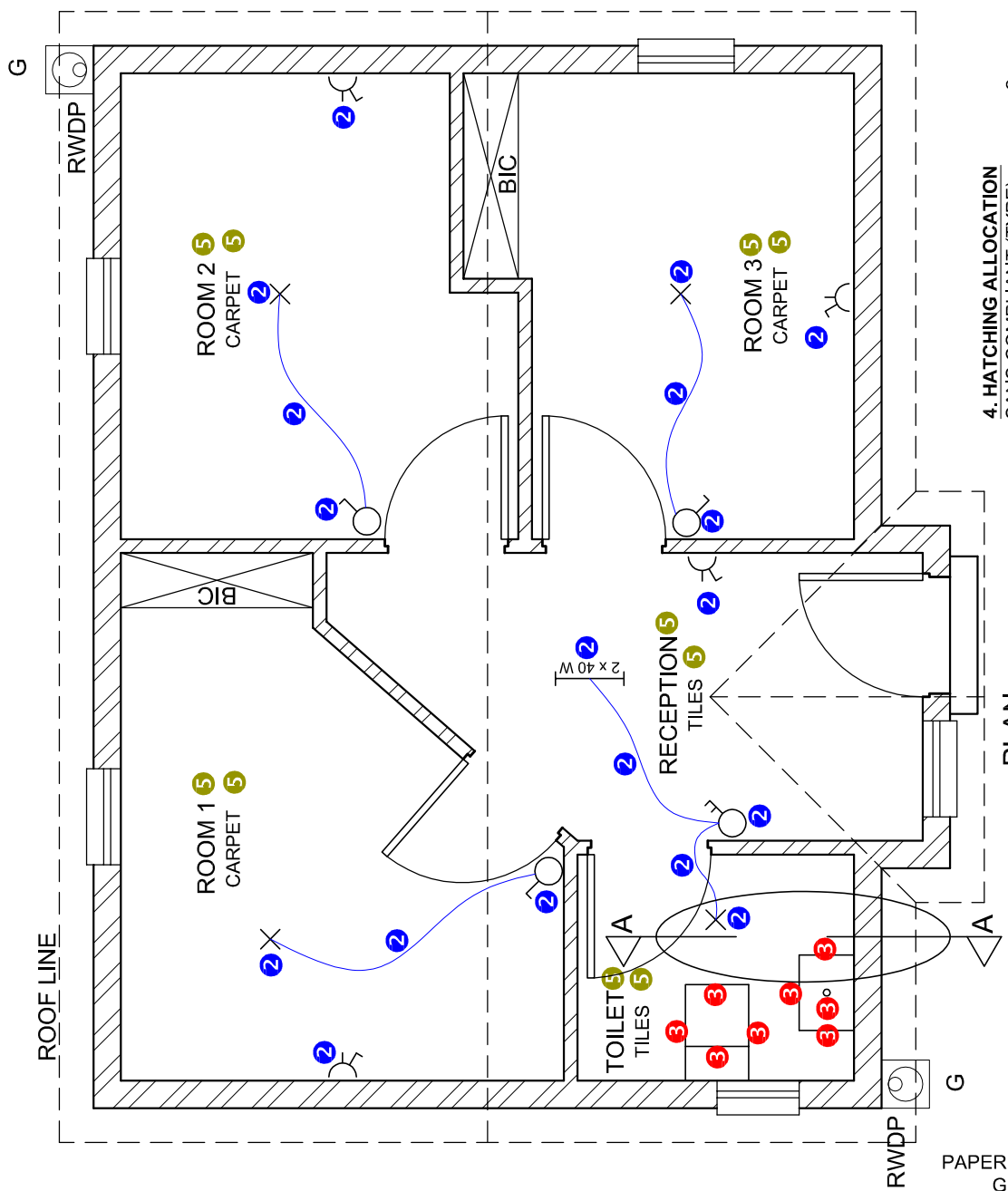
ASSESSMENT CRITERIA		
1	CONSTRUCTION + VPs	6
2	BASE + STAIRS	12½
3	POOL	13½
4	CIRCULAR ARC	7
TOTAL		39



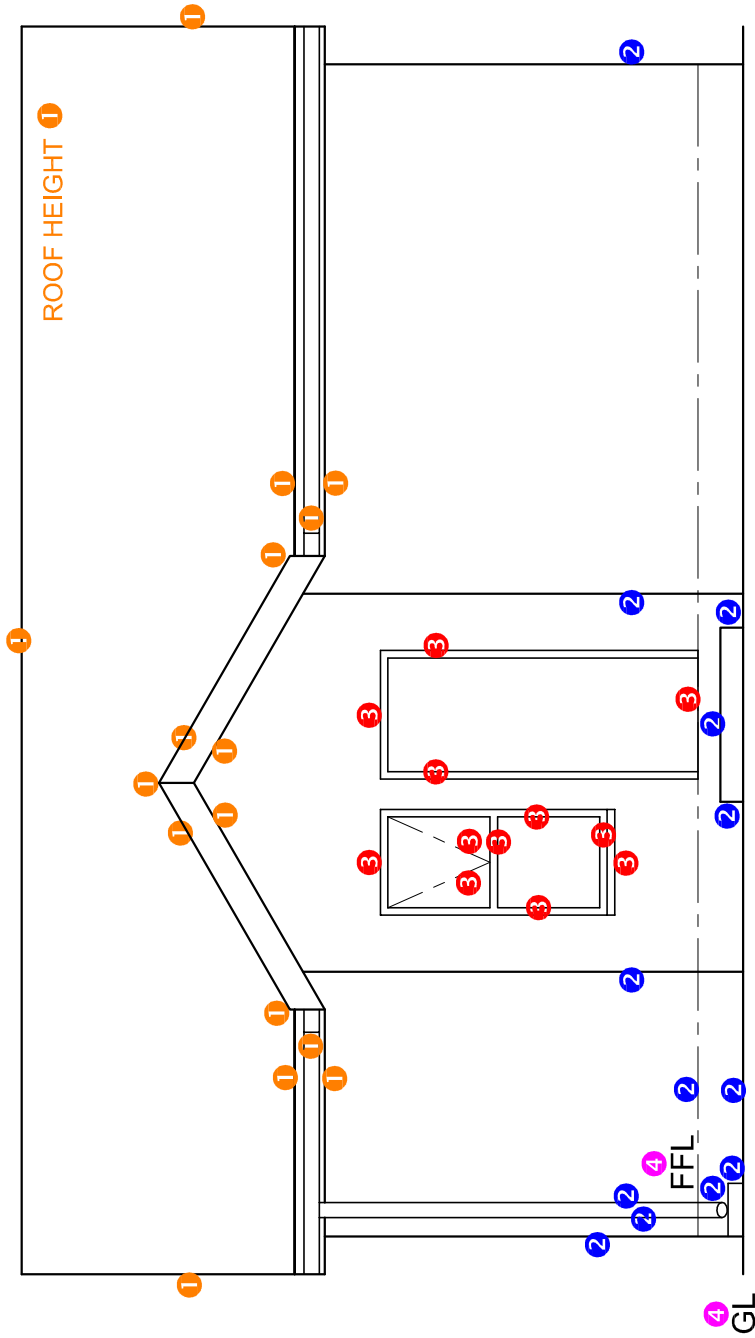
PAPER 1 QUESTION 3
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AUXILIARY VIEW FOR ROOF HEIGHT



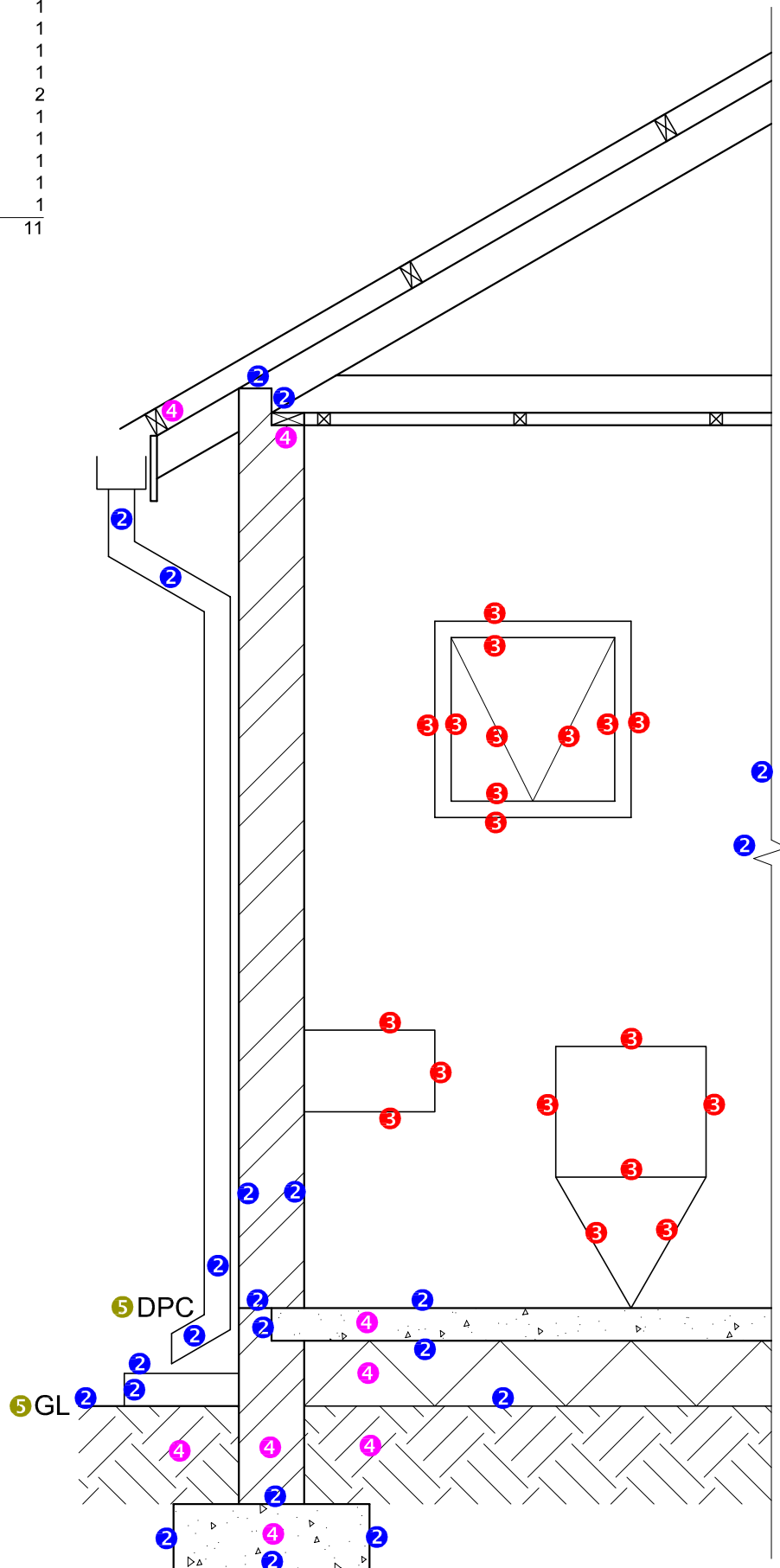
ASSESSMENT CRITERIA	
FLOOR PLAN	
POSSIBLE	
1 DOORS + WINDOWS	15
2 ELECTRICAL	9
3 FIXTURES	4
4 HATCHING	4
5 LABELS	5
SUBTOTAL	37



ASSESSMENT CRITERIA	
NORTH ELEVATION	
1	ROOF 8½
2	WALLS + RWDP + FFL + GULLY 6½
3	DOOR + WINDOW 6
4	LABELS 1½
SUBTOTAL	
22½	

1. MARK ALLOCATION FOR ROOF

A: ROOF ANGLE	1
B: ROOF SHEET	1
C: PURLIN	1
D: PURLIN SPACING	1
E: TRUSS	2
F: FASCIA BOARD	1
G: WALL PLATE	1
H: BRANDING	1
I: CEILING BOARD	1
J: GUTTER	1
TOTAL	11

**ASSESSMENT CRITERIA****DETAILED SECTION**

1	ROOF DETAIL	11
2	FOUNDATION + WALL + RWDP + GULLEY + LINE BREAK	11
3	WINDOW + WC + WB	9½
4	HATCHING	4
5	LABELS	1
SUBTOTAL		36½

DETAILED SECTION
SCALE 1 : 20

PAPER 1 QUESTION 4
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