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basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

NATIONAL SENIOR CERTIFICATE

GRADE 12

ENGINEERING GRAPHICS AND DESIGN P1

NOVEMBER 2021

MARKING GUIDELINES

MARKS: 100

These marking guidelines consist of 8 pages.

ANSWERS		
1	JBV-500W	1
2	JOHN	1
3	2021-01-23	1
4	DUPLEX PRINTING	1
5	Ø 100	1
6	INSPECTION CHAMBER	1
7	DECIDUOUS	1
8	CONCRETE WALL	1
9	GATE OPENING	1
10	ADJACENT BUILDING/STRUCTURE/HOUSE	1
11	6	1
12	BROWN	1
13	CROSSES BUILDING LINE	2
14	1 : 40	1
15	13,2	2
16	B/TOP RIGHT/349,2	1
17	SOUTH EAST/SE	2
18	See the title panel	3
19		3
20		4
TOTAL		30

ANSWER 18

APPLYING CORRECT FORMULA ✓

$$\text{Perimeter} = AB + BC + CE + EG + FG + FA$$

$$= 38,16 + 60 + 3,6 + 33,8 + 34,56 + 26,2$$

$$= 196,32 \quad \text{CONVERTED TO METER} \quad \checkmark$$

ANSWER 19

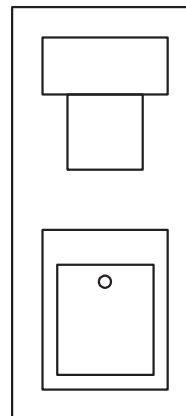
APPLYING CORRECT FORMULA ✓

$$\text{Area} = L \times B$$

$$= (15,9 \times 5,0) + (3,3 \times 5,4) + (8 \times 4,1)$$

$$= 130,12 \text{ m}^2 \quad \checkmark \quad \checkmark$$

ANSWER 20

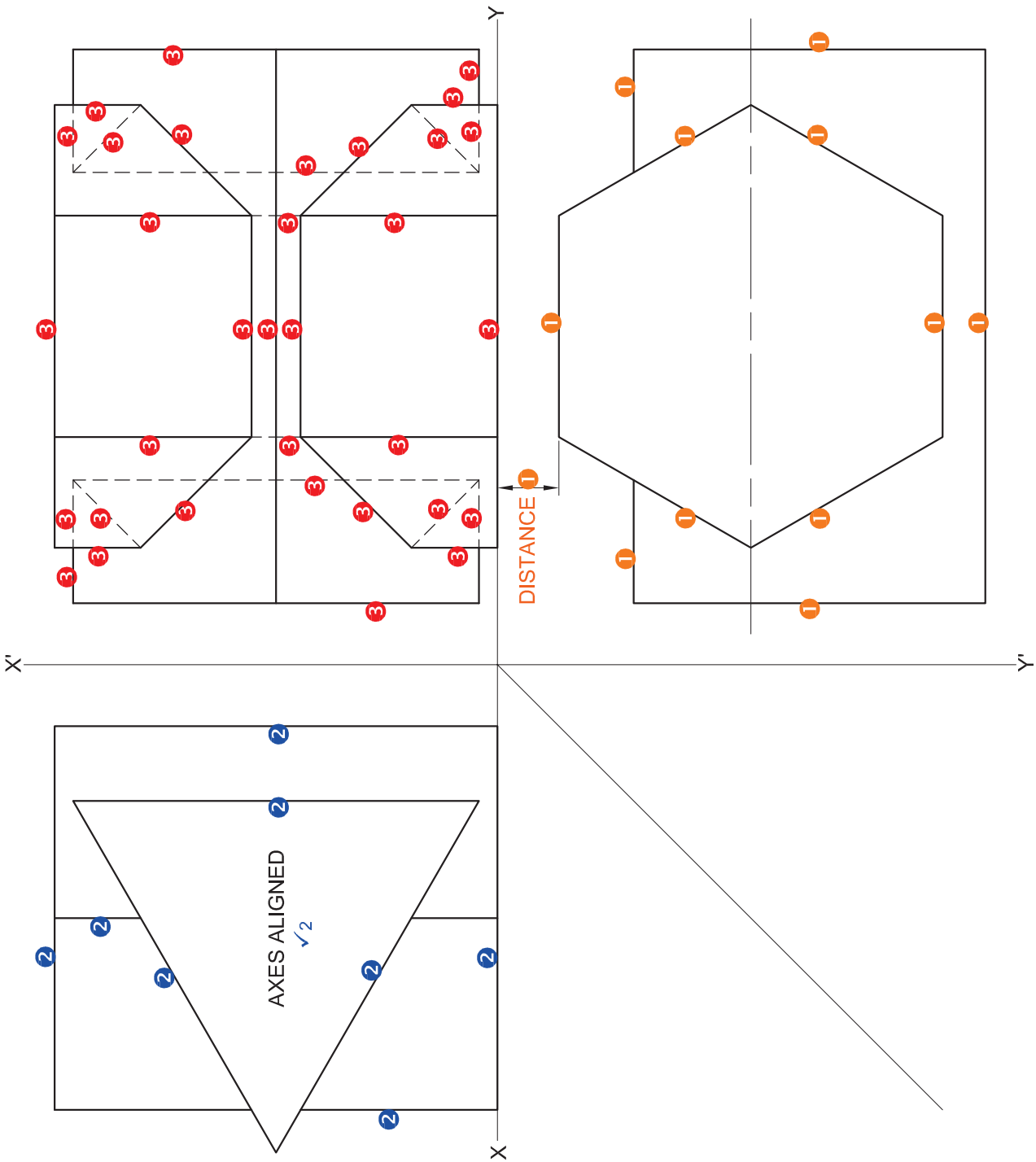


FREEHAND 0.5

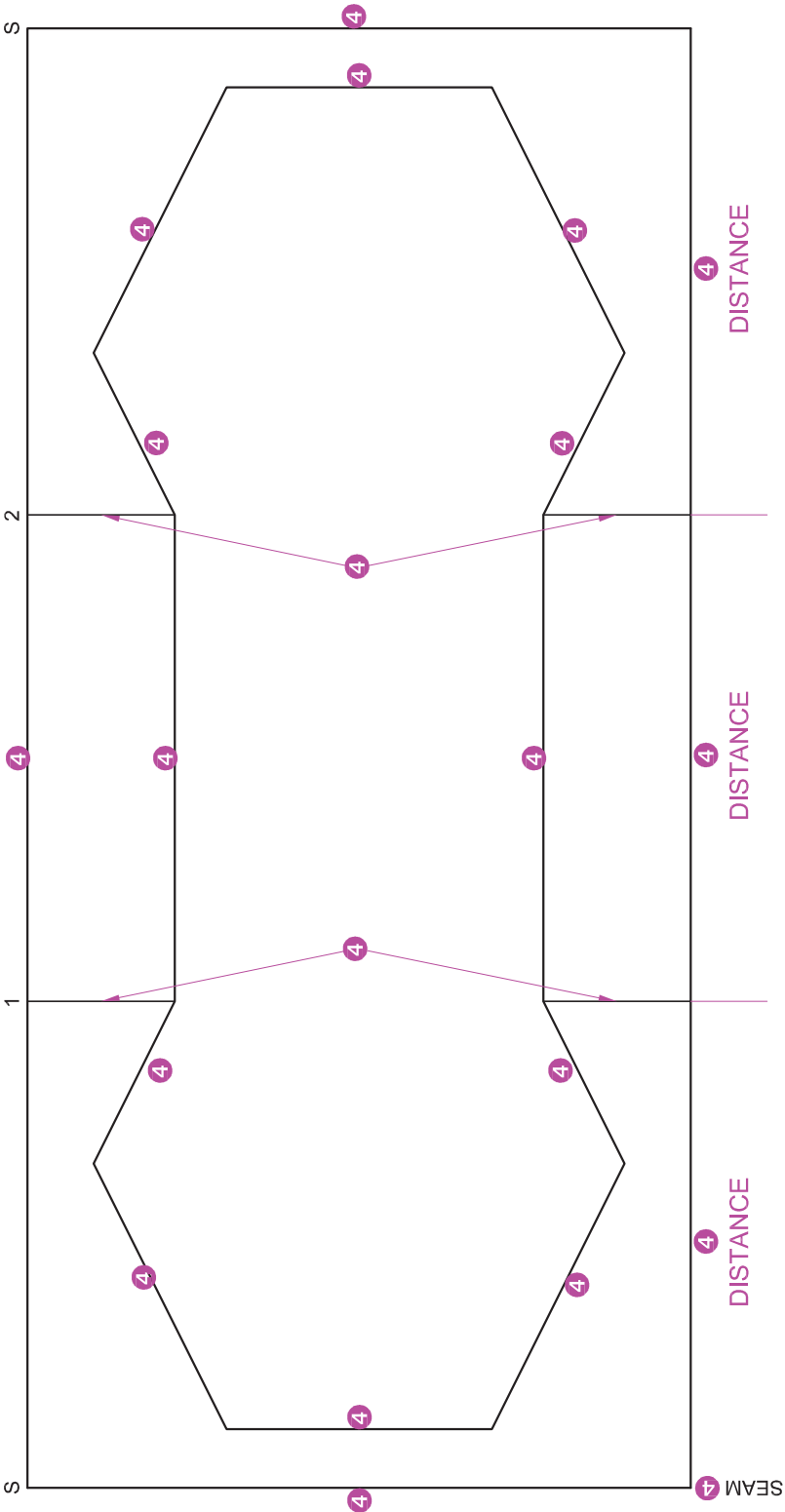
 RECTANGLE (T) 1
 SQUARE/
 RECTANGLE (B) 1

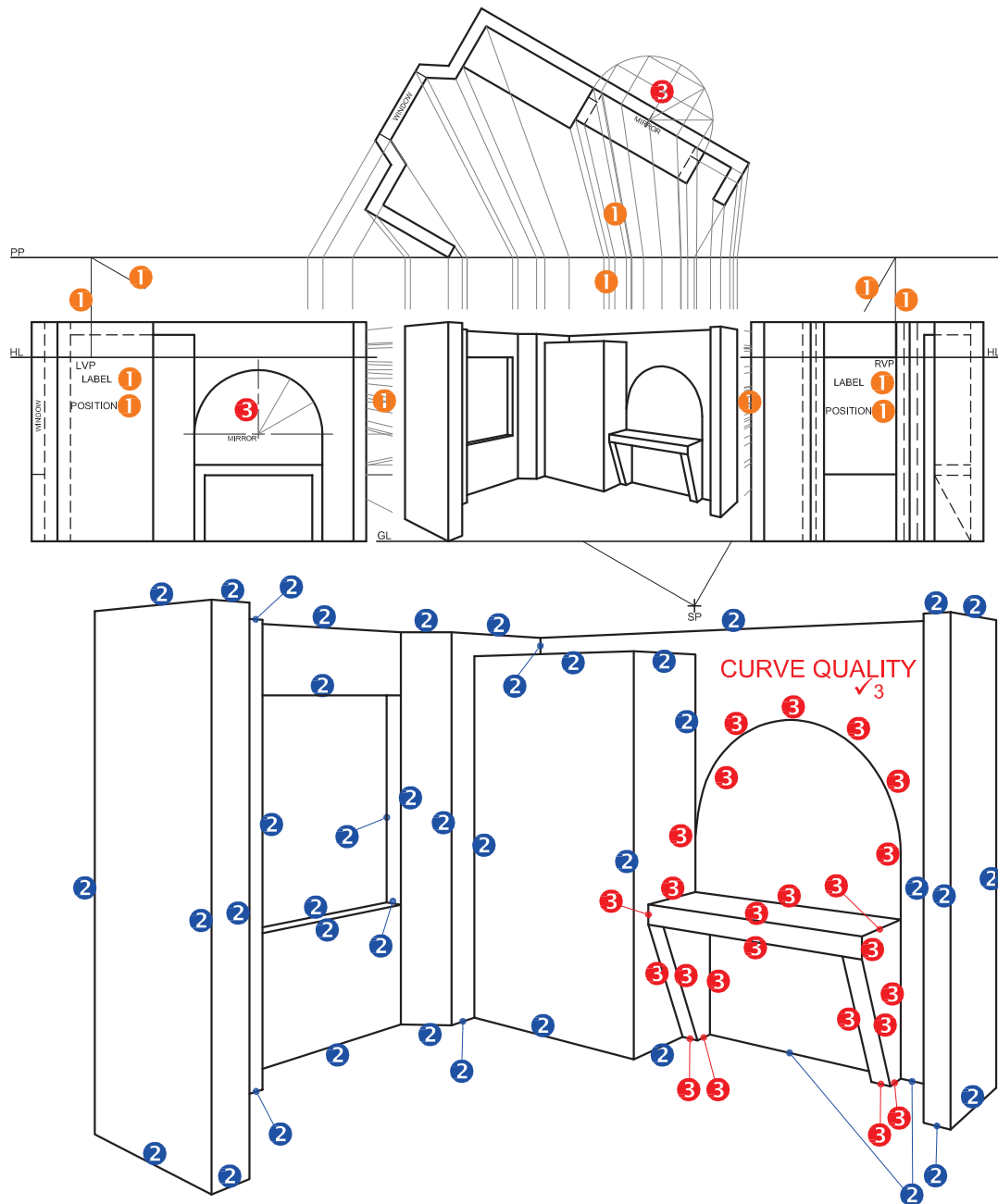
 RECTANGLE (B) 0.5
 RECTANGLE (S) 0.5
 HOLE 0.5

ASSESSMENT CRITERIA		
1	TOP VIEW	6
2	RIGHT VIEW	5
3	FRONT VIEW	16 $\frac{1}{2}$



ASSESSMENT CRITERIA		
4	DEVELOPMENT	10 $\frac{1}{2}$
TOTAL		38



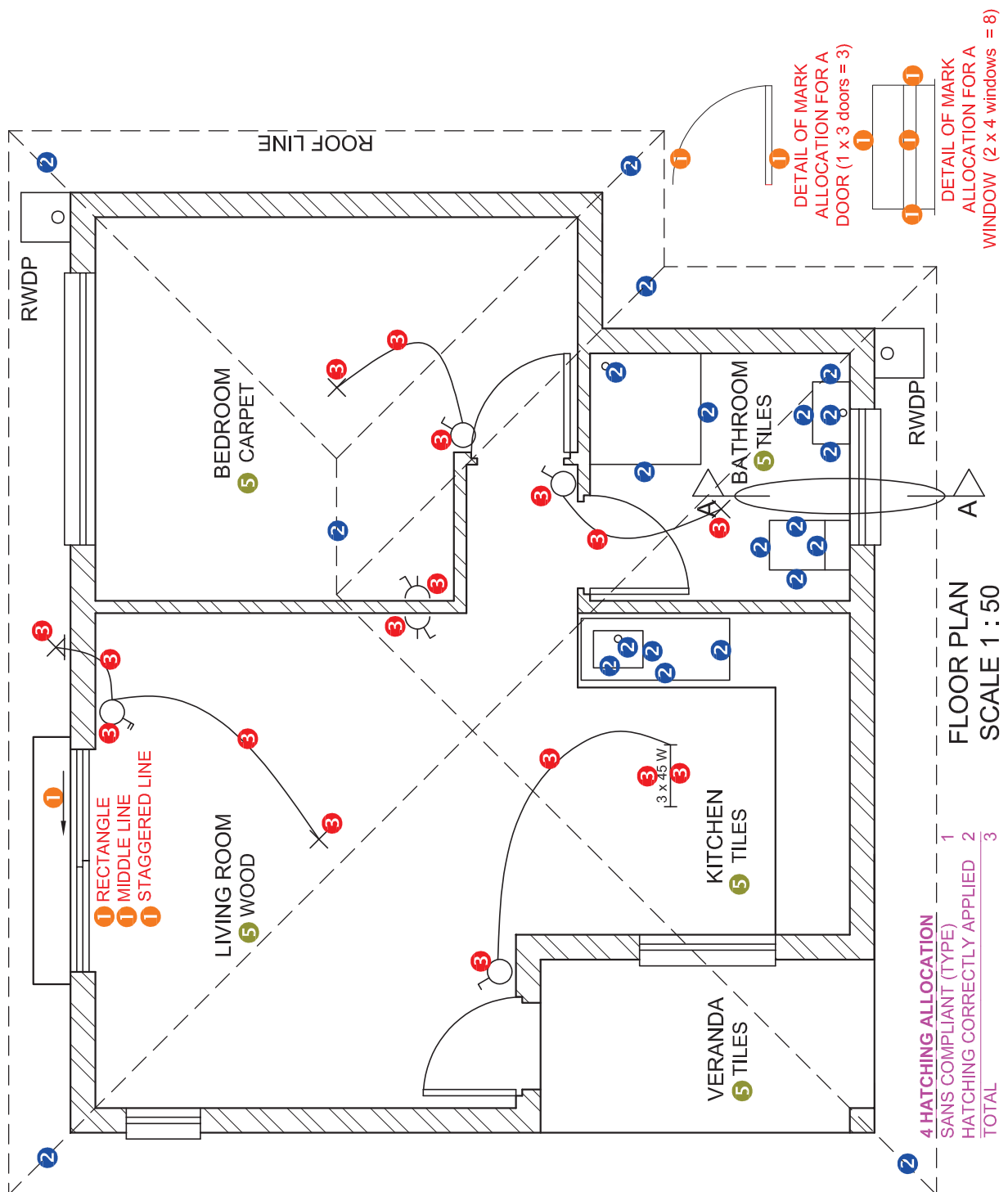


PAPER 1 QUESTION 3
GRADE 12
NOVEMBER 2021
MARKING GUIDELINE

ASSESSMENT CRITERIA

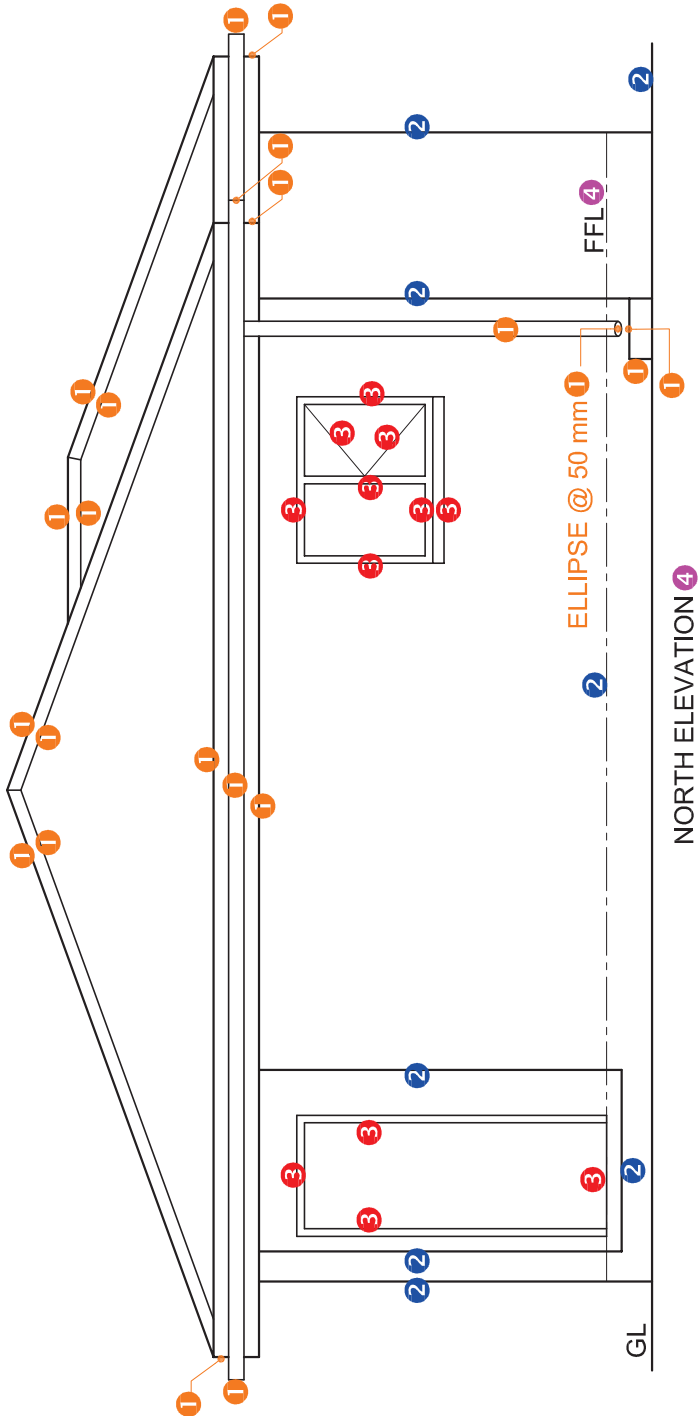
1	CONSTRUCTION	6
2	WALLS + CUPBOARD + WINDOW	20
3	TABLE + MIRROR	14
TOTAL		40

ASSESSMENT CRITERIA	
FLOOR PLAN	
1	DOORS + WINDOWS 13
2	FIXTURES + ROOF LINES 11
3	ELECTRICAL $8\frac{1}{2}$
4	HATCHING 3
5	LABELS $2\frac{1}{2}$
SUBTOTAL 38	



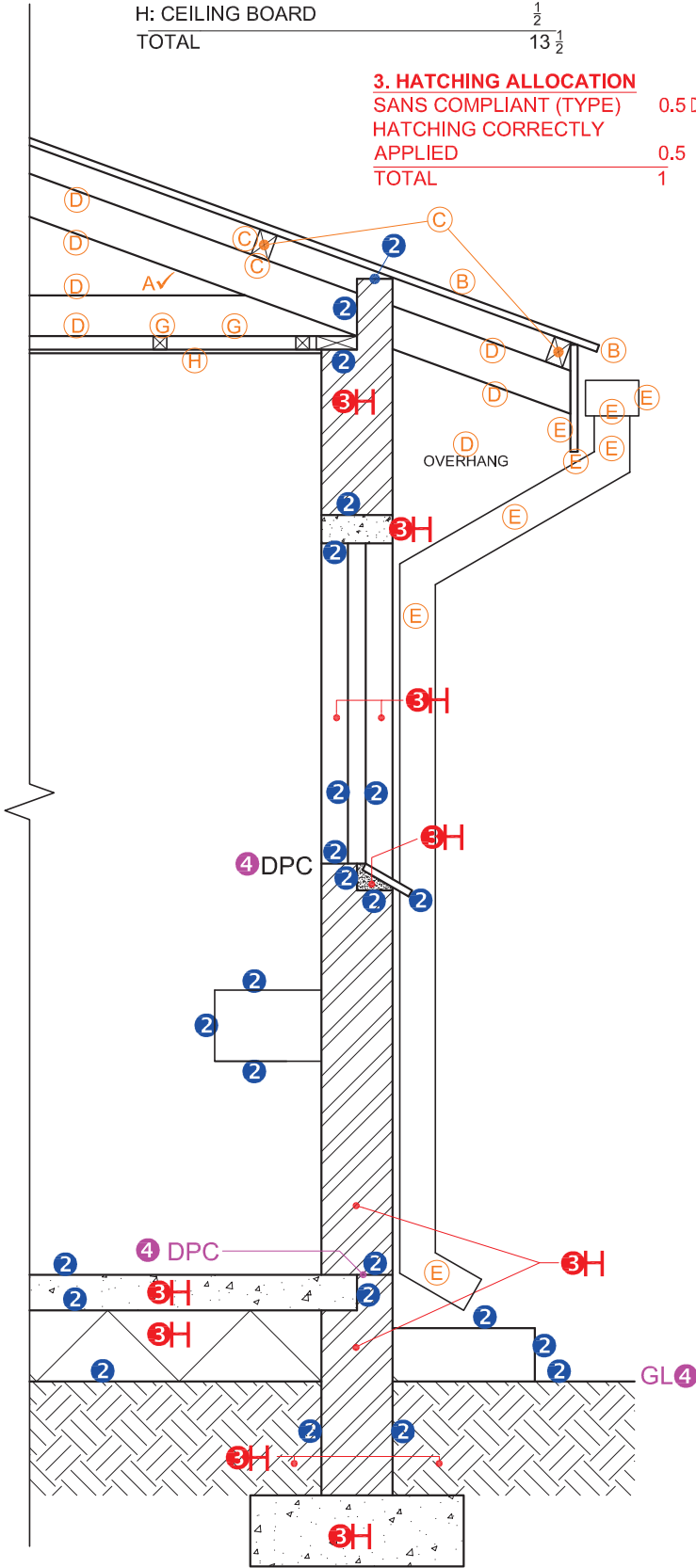
PAPER 1 QUESTION 4
GRADE 12
NOVEMBER 2021
MARKING GUIDELINE

ASSESSMENT CRITERIA	
NORTH ELEVATION	
1	ROOF + RWDP + GULLEY
2	WALLS + STEP + FFL
3	DOOR + WINDOW
4	LABELS
SUBTOTAL	
21 1 2	



1. MARK ALLOCATION FOR ROOF		
A: ROOF ANGLE		1
B: ROOF SHEET		1
C: PURLIN + SPACING		1 ¹ / ₂
D: TRUSS + OVERHANG		3 ¹ / ₂
E: FASCIA BOARDS, GUTTER + RWDP		4
F: WALL PLATE		1
G: BRANDERING + SPACING		1
H: CEILING BOARD		¹ / ₂
TOTAL		13 ¹ / ₂

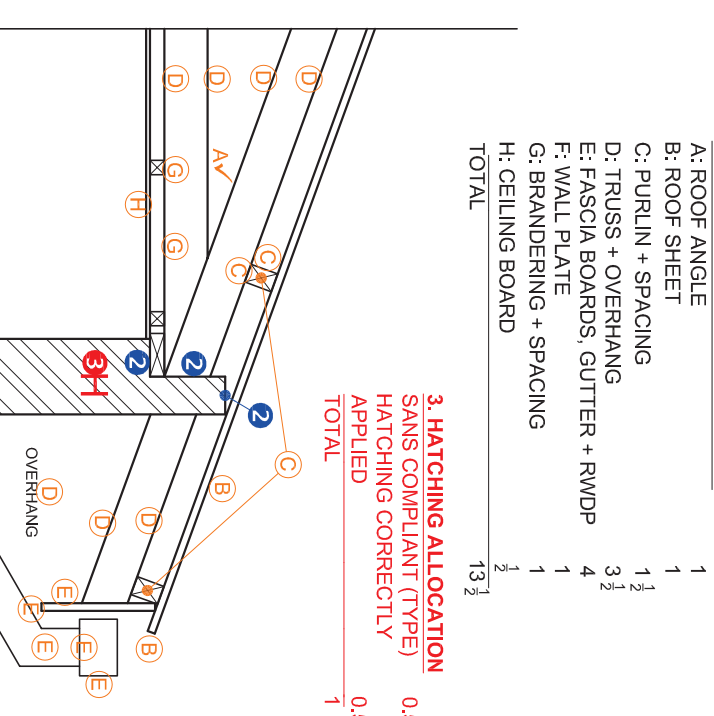
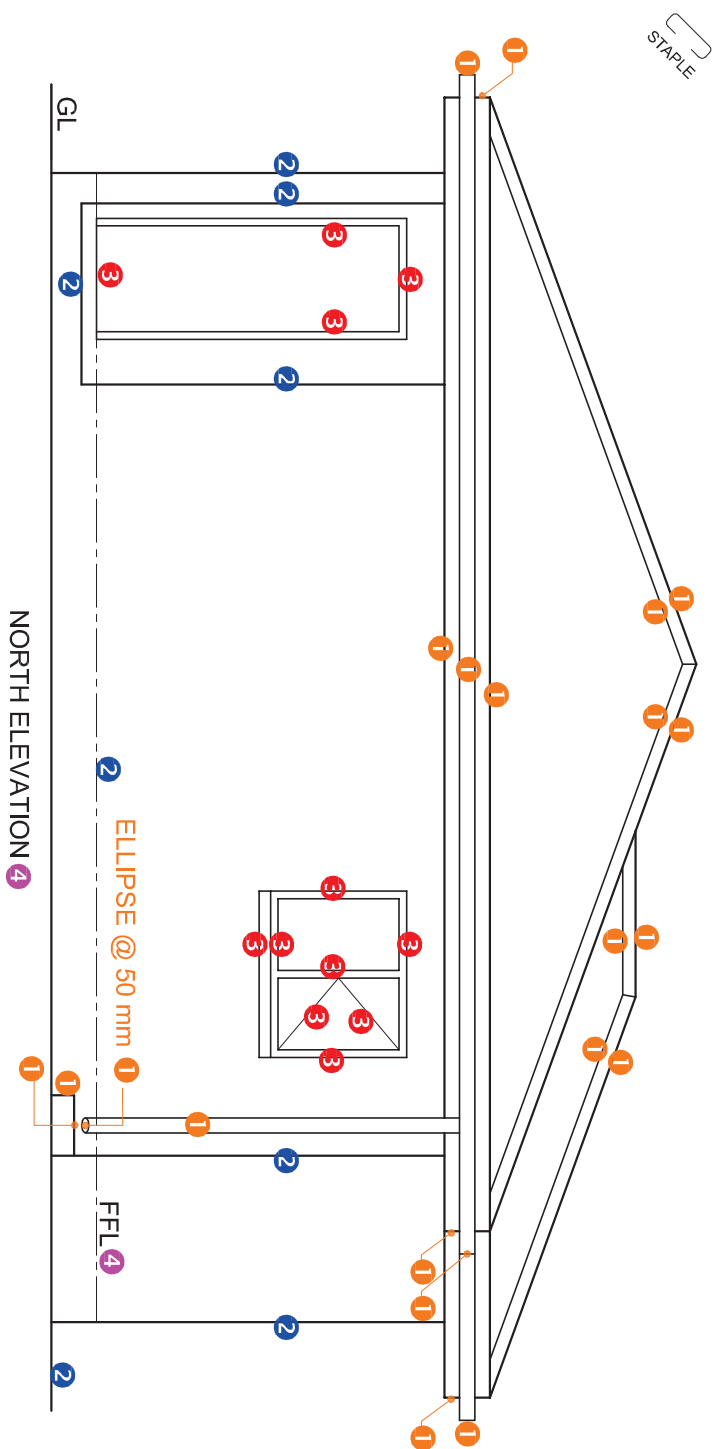
3. HATCHING ALLOCATION		
SANS COMPLIANT (TYPE)	0.5	
HATCHING CORRECTLY APPLIED	0.5	
TOTAL	1	



SECTION A-A
SCALE 1 : 20

PAPER 1 QUESTION 4
GRADE 12
NOVEMBER 2021
MARKING GUIDELINE

ASSESSMENT CRITERIA		
DETAILED SECTION		
1	ROOF DETAIL	13 ¹ / ₂
2	SLAB, WALL, WINDOW + BASIN	12
3	HATCHING	5 ¹ / ₂
4	LABELS	1 ¹ / ₂
SUBTOTAL		32 ¹ / ₂



MARK ALLOCATION FOR SECTION OF ROOF		FOR OFFICIAL USE ONLY	
A		INCORRECT SCALE(S) USED	
B		NON-ALIGNMENT OF VIEWS	
C		VIEW(S) ROTATED	
D		SECTION VIEWED INCORRECTLY	
E		INCORRECT LETTERING	
F			
G			
H			
TOTAL		TOTAL	

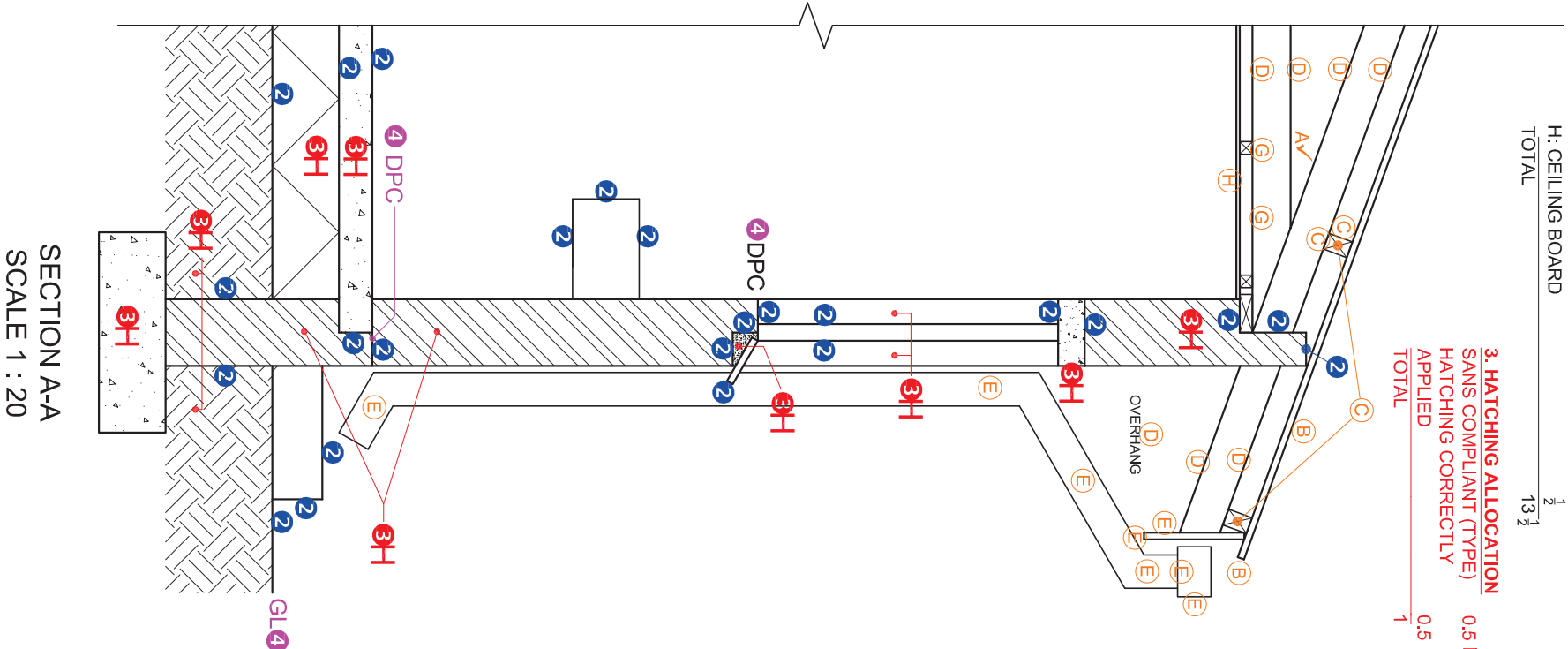
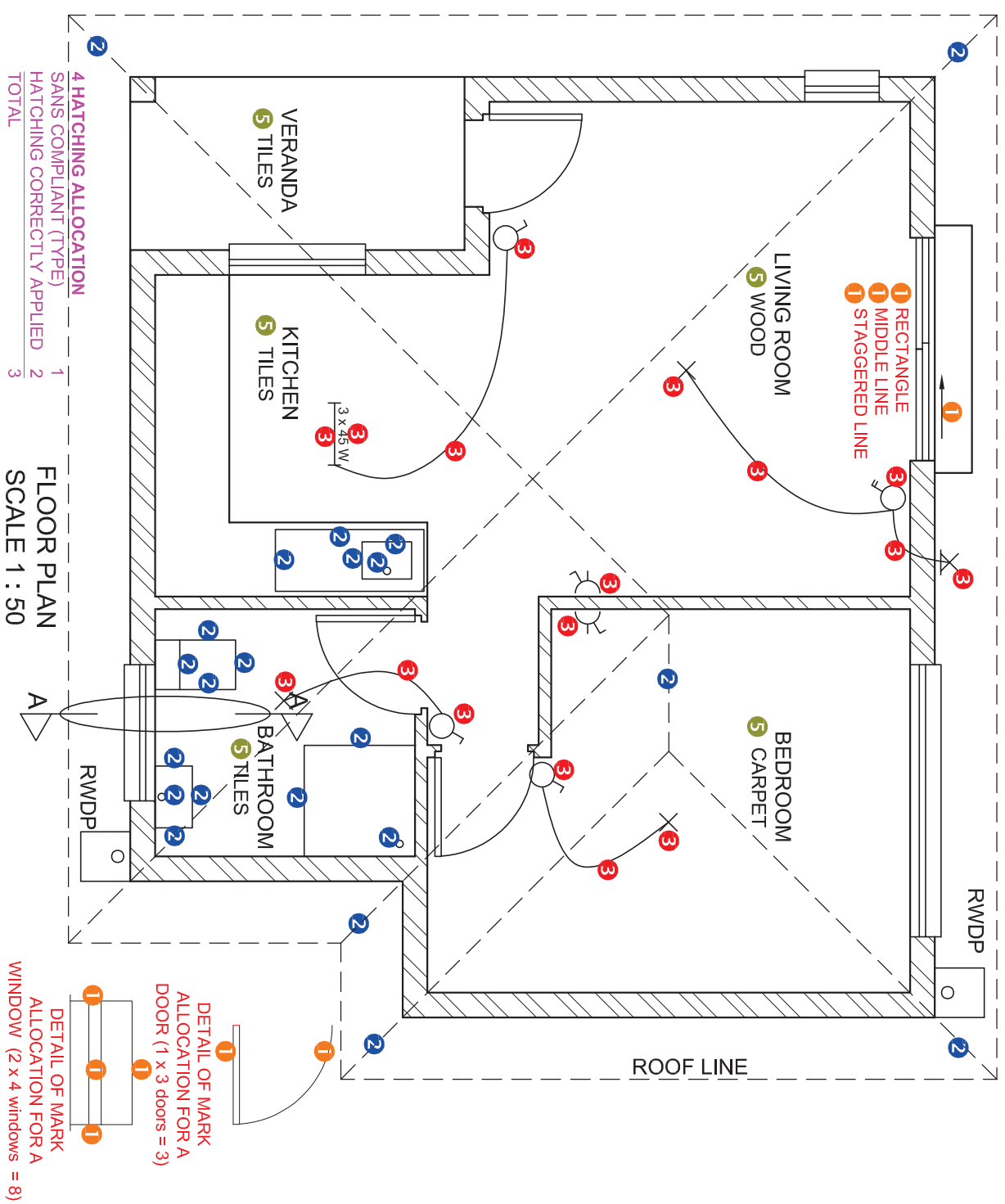
ASSESSMENT CRITERIA

FLOOR PLAN				
	POSSIBLE	OBTAINED	SIGN	MODERATED
1	DOORS + WINDOWS	13		
2	FIXTURES + ROOF LINES	11		
3	ELECTRICAL	8 $\frac{1}{2}$		
4	HATCHING	3		
5	LABELS	2 $\frac{1}{2}$		
SUBTOTAL		38		

NORTH ELEVATION			
1	ROOF + RWDP + GULLEY	10 $\frac{1}{2}$	
2	WALLS + STEP + FFL	4	
3	DOOR + WINDOW	6	
4	LABELS	1	
SUBTOTAL		21 $\frac{1}{2}$	

DETAILED SECTION				
1	ROOF DETAIL	13 1/2		
2	SLAB WALL, WINDOW + BASIN	12		
3	HATCHING	5 1/2		
4	LABELS	1 1/2		
SUBTOTAL		32 1/2		
TOTAL		92		
PENALTIES (-)				

GRAND TOTAL		
EXAMINATION NUMBER		
EXAMINATION NUMBER		6



MARK ALLOCATION FOR SECTION OF ROOF		FOR OFFICIAL USE ONLY		
		INCORRECT SCALE(S) USED	NON-ALIGNMENT OF VIEWS	VIEW(S) ROTATED
A				
B				
C				
D				
E		SECTION VIEWED INCORRECTLY		
F		INCORRECT LETTERING		
G				
H				
TOTAL				

ASSESSMENT CRITERIA

FLOOR PLAN

	POSSIBLE	OBTAINED	SIGN	MODERATED
1	DOORS + WINDOWS	13		
2	FIXTURES + ROOF LINES	11		
3	ELECTRICAL	8 1/2		
4	HATCHING	3		
5	LABELS	2 1/2		
SUBTOTAL		38		

NORTH ELEVATION

1	ROOF + RWDP + GULLEY	10 1/2		
2	WALLS + STEP + FFL	4		
3	DOOR + WINDOW	6		
4	LABELS	1		
SUBTOTAL		21 1/2		

DETAILED SECTION

1	ROOF DETAIL	13 1/2		
2	SLAB WALL, WINDOW + BASIN	12		
3	HATCHING	5 1/2		
4	LABELS	1 1/2		
SUBTOTAL		32 1/2		
TOTAL		92		
PENALTIES (-)				
GRAND TOTAL				
EXAMINATION NUMBER				

EXAMINATION NI UMBER

6