



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	<i>See the title panel</i>	3
19		3
20		4
TOTAL		30

ANSWER 18

APPLYING CORRECT FORMULA ✓

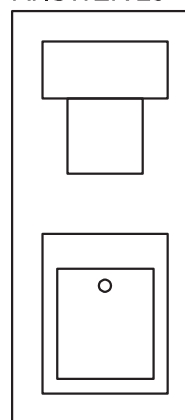
$$\begin{aligned} \text{Perimeter} &= AB + BC + CE + EG + FG + FA \\ &= 38,16 + 60 + 3,6 + 33,8 + 34,56 + 26,2 \\ &= 196,32 \quad \text{CONVERTED TO METER} \end{aligned}$$

ANSWER 19

APPLYING CORRECT FORMULA ✓

$$\begin{aligned} \text{Area} &= L \times B \\ &= (15,9 \times 5,0) + (3,3 \times 5,4) + (8 \times 4,1) \\ &= 130,12 \text{ m}^2 \end{aligned}$$

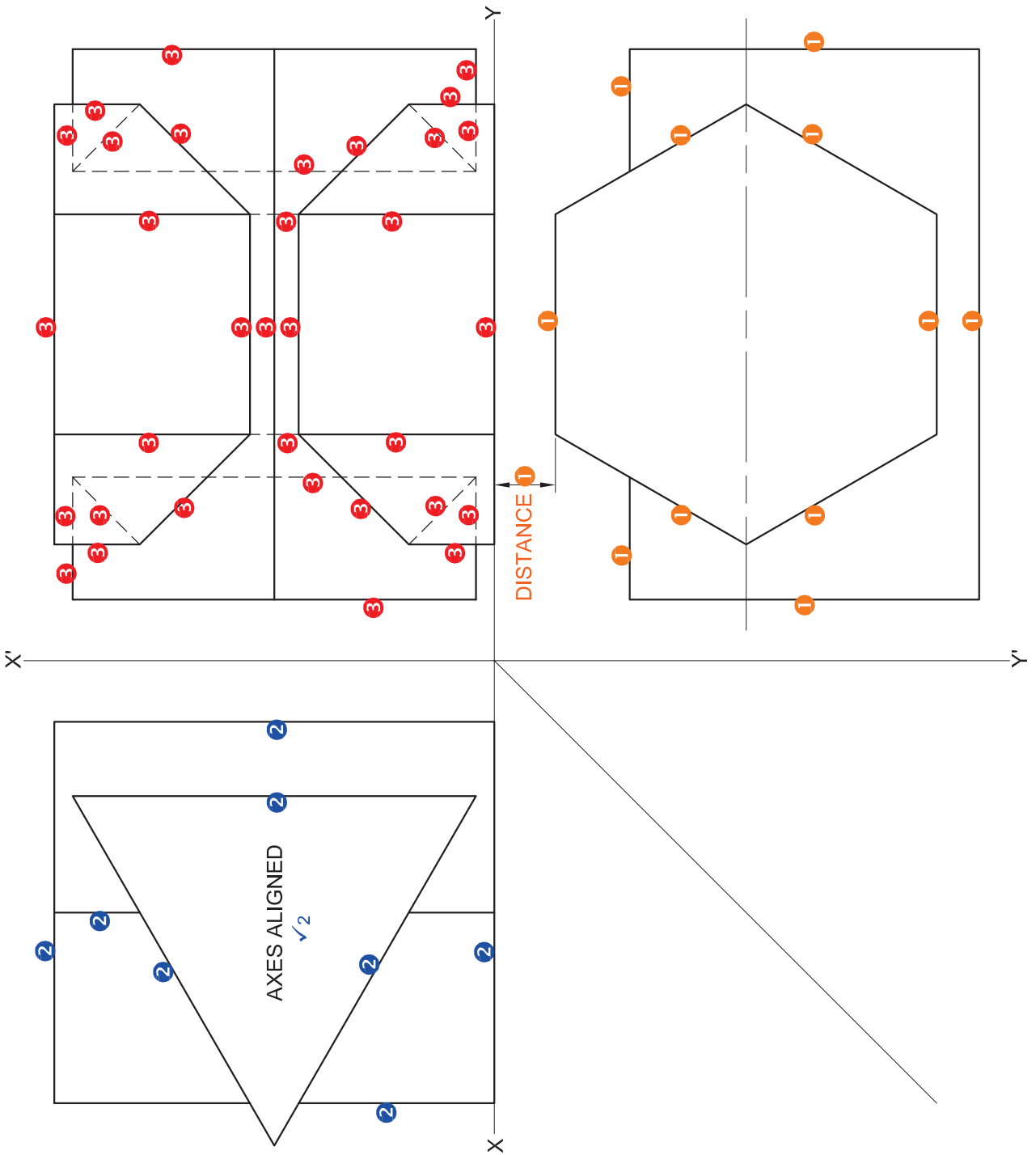
ANSWER 20



FREEHAND 0.5
RECTANGLE (T) 1
SQUARE/
RECTANGLE (B) 1

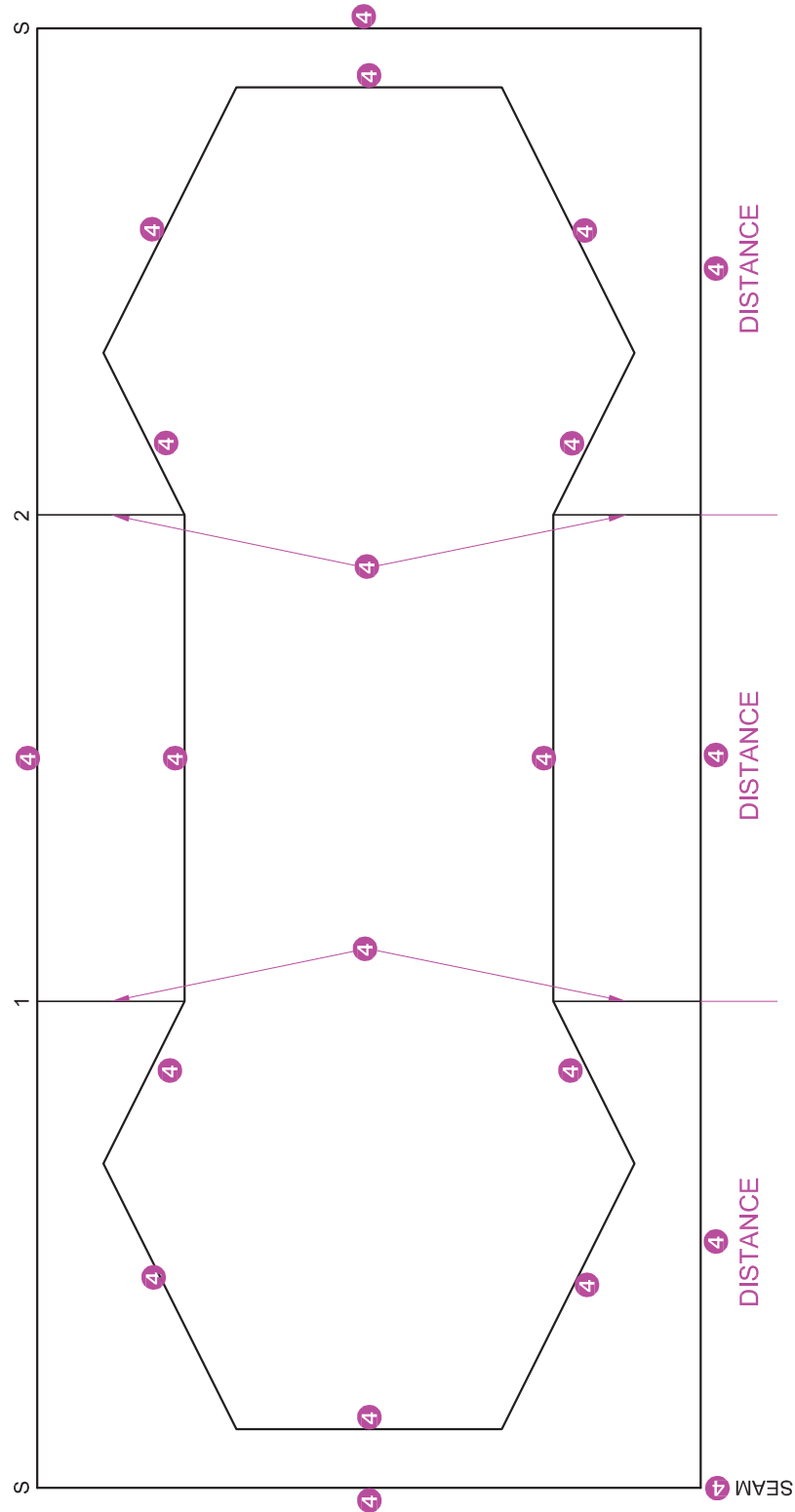
RECTANGLE (B) 0.5
RECTANGLE (S) 0.5
HOLE 0.5

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

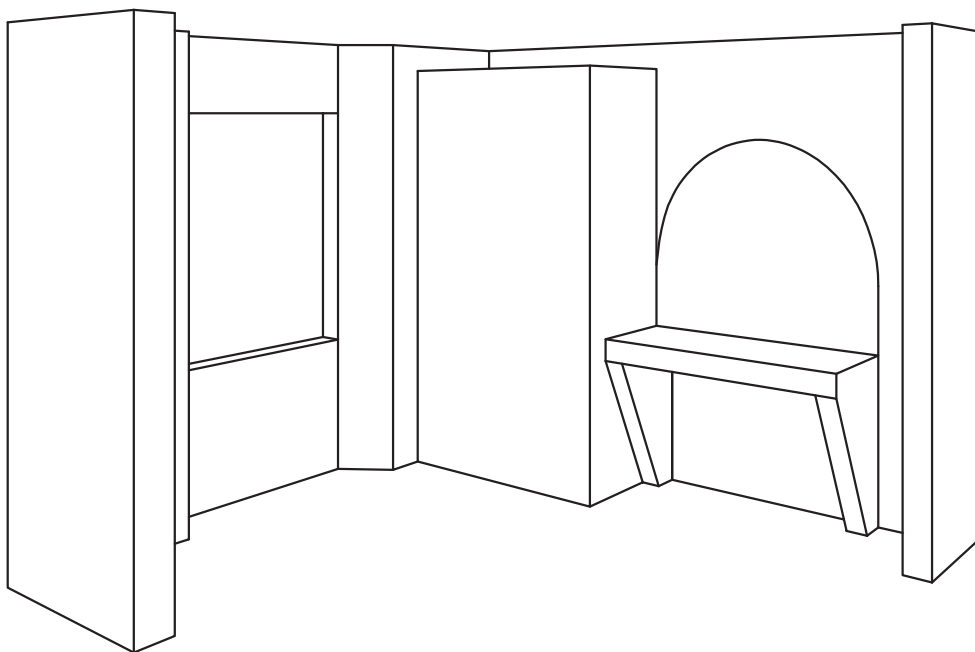
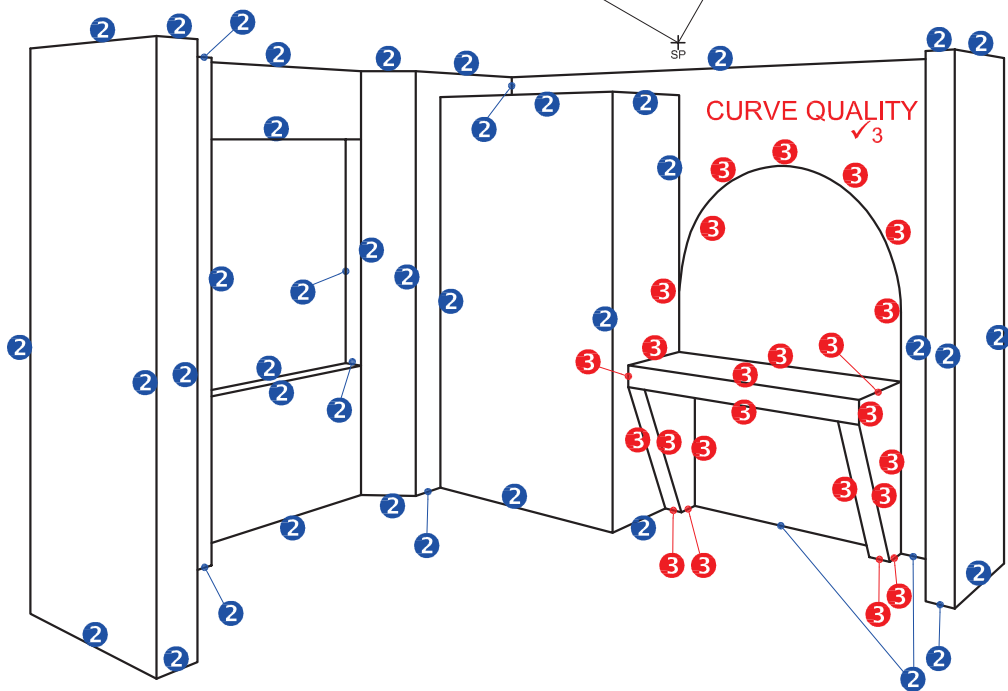
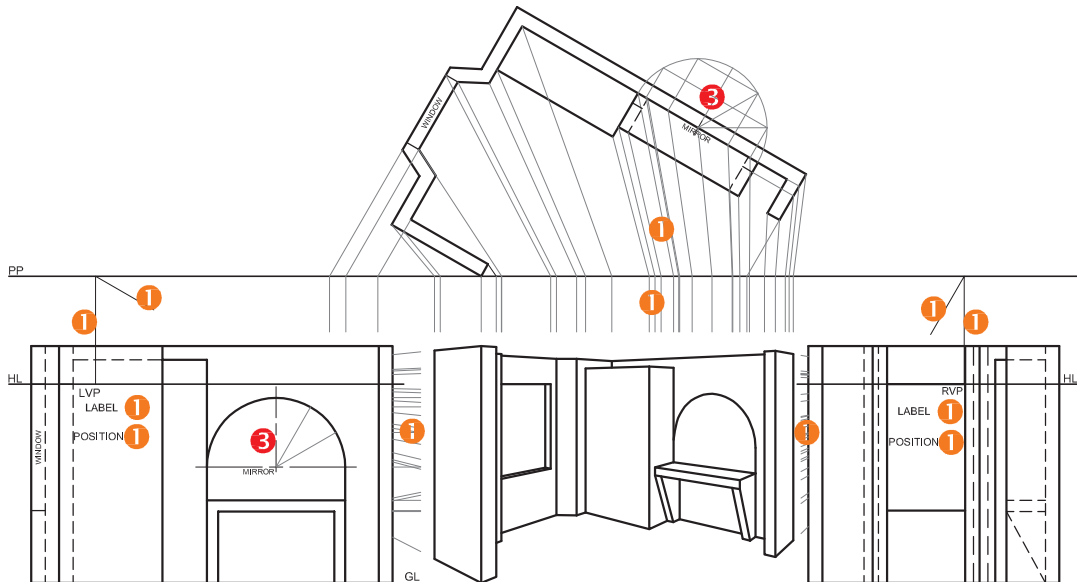


PAPER 1 QUESTION 2
 GRADE 12
 NOVEMBER 2021
 MARKING GUIDELINE

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



PAPER 1 QUESTION 2
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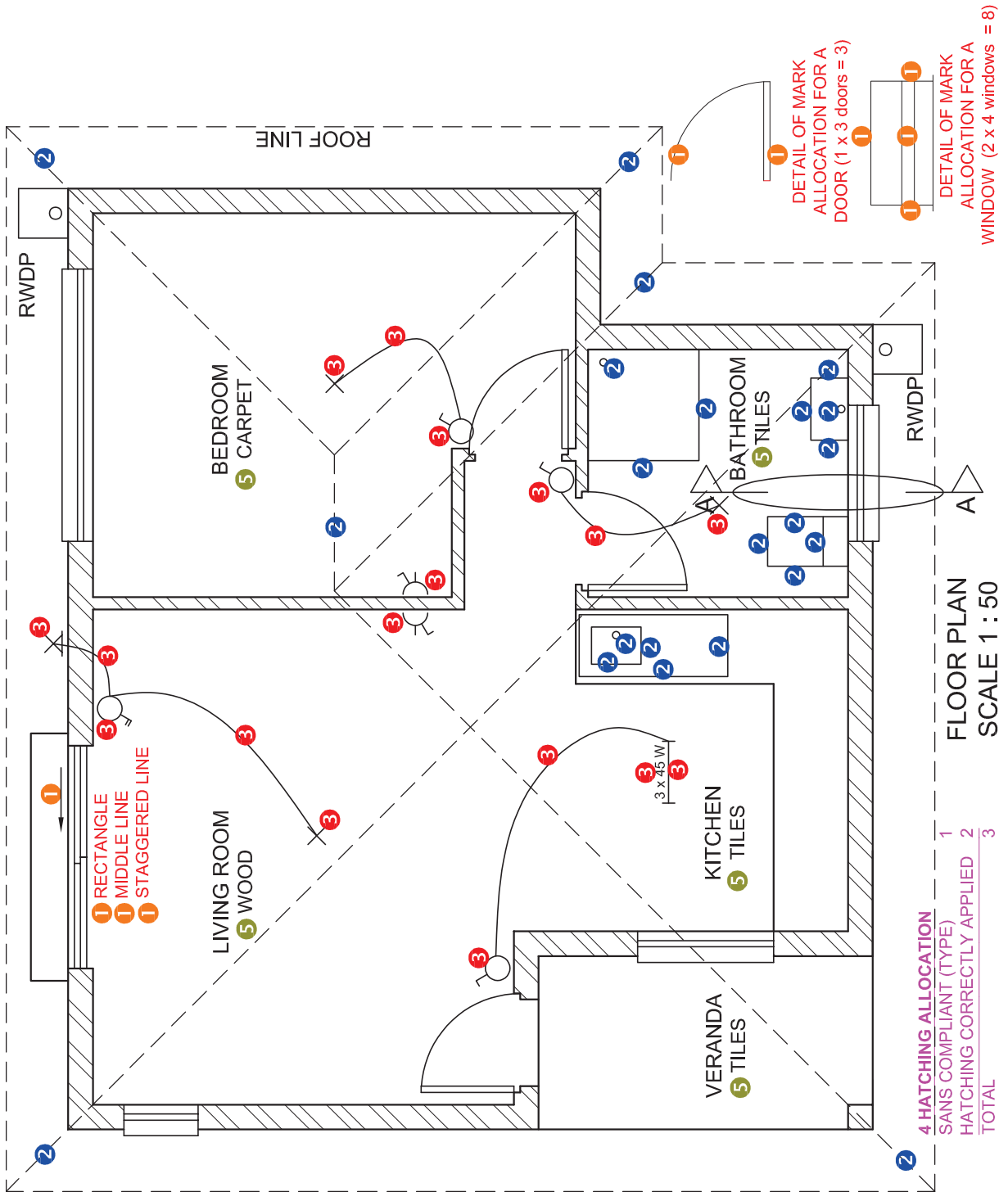


PAPER 1 QUESTION 3
 GRADE 12
 NOVEMBER 2021
 MARKING GUIDELINE

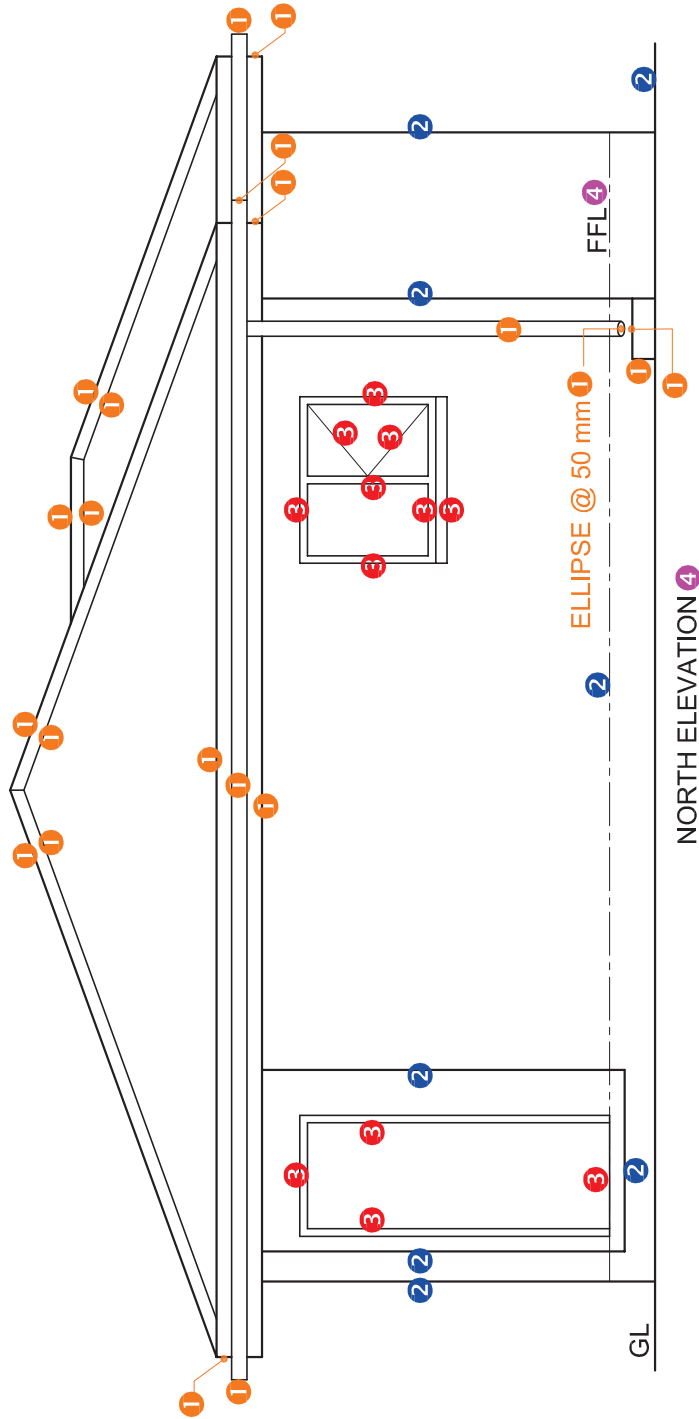
ASSESSMENT CRITERIA		
1	CONSTRUCTION	6
2	WALLS + CUPBOARD + WINDOW	20
3	TABLE + MIRROR	14
TOTAL		40

PAPER 1 QUESTION 4
 GRADE 12
 NOVEMBER 2021
 MARKING GUIDELINE

ASSESSMENT CRITERIA		FLOOR PLAN	
1	DOORS + WINDOWS	13	
2	FIXTURES + ROOF LINES	11	
3	ELECTRICAL	8 1/2	
4	HATCHING	3	
5	LABELS	2 1/2	
SUBTOTAL		38	



PAPER 1 QUESTION 4
 GRADE 12
 NOVEMBER 2021
 MARKING GUIDELINE




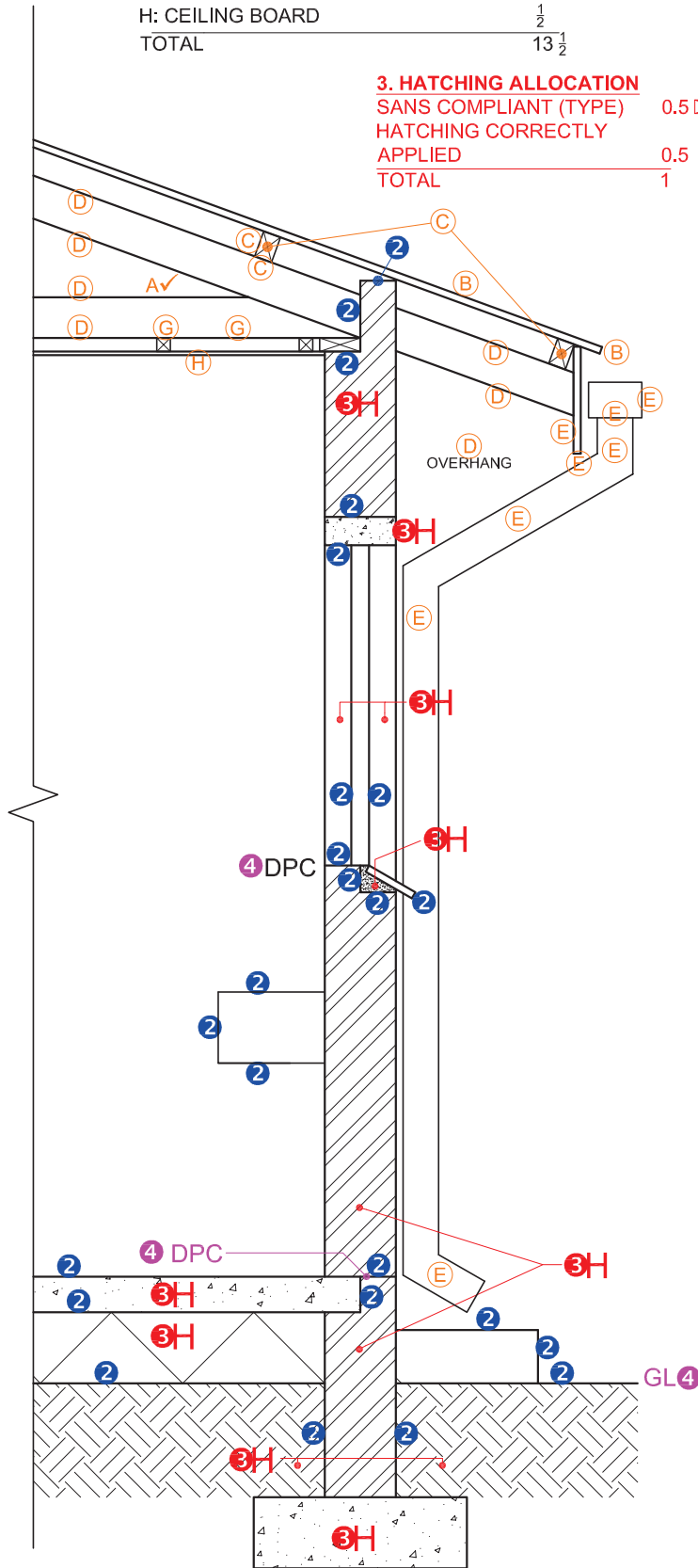
ASSESSMENT CRITERIA		
NORTH ELEVATION		
1	ROOF + RWDP + GULLEY	10 ½
2	WALLS + STEP + FFL	4
3	DOOR + WINDOW	6
4	LABELS	1
SUBTOTAL		21 ½

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

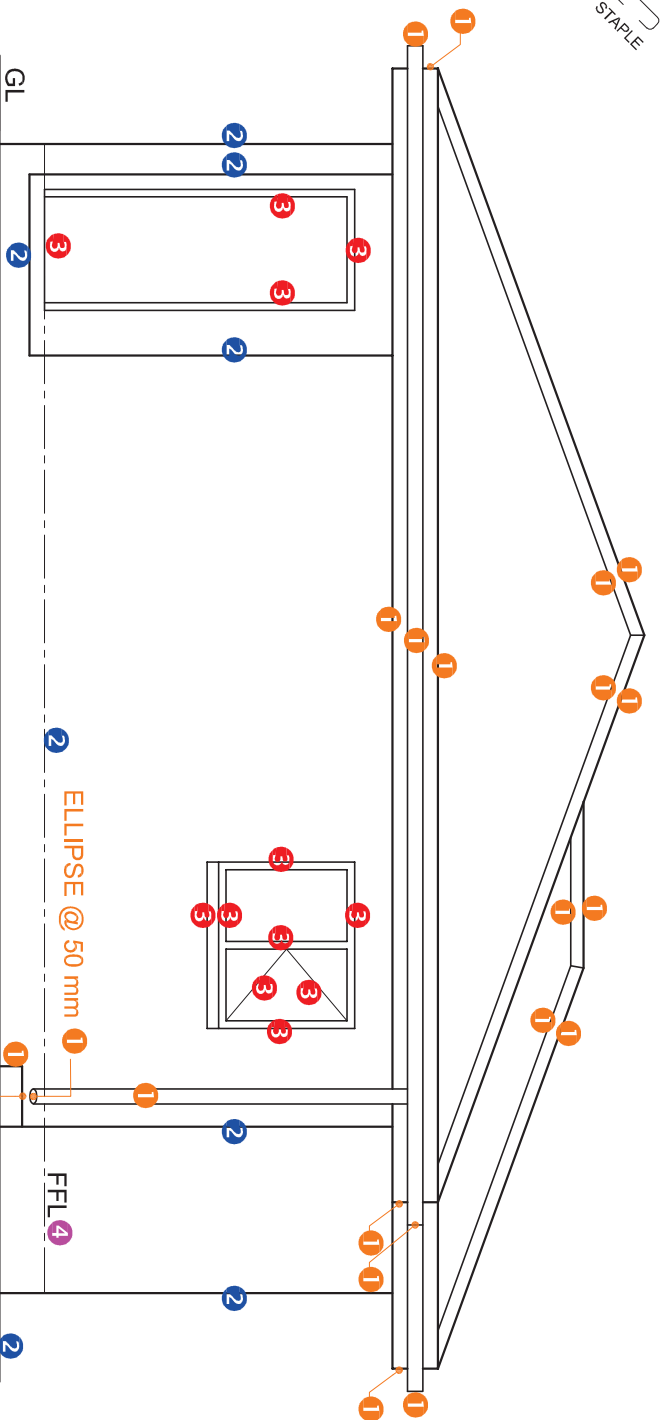
SANS COMPLIANT (TYPE)	0.5	
HATCHING CORRECTLY APPLIED	0.5	
TOTAL	1	



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



- 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 0.5
 APPLIED 1
 TOTAL 1

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 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	

GRAND TOTAL			
EXAMINATION NUMBER			
EXAMINATION NUMBER			
6			

