



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

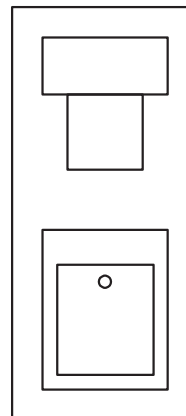
APPLYING CORRECT FORMULA ✓

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

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

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

ANSWER 20



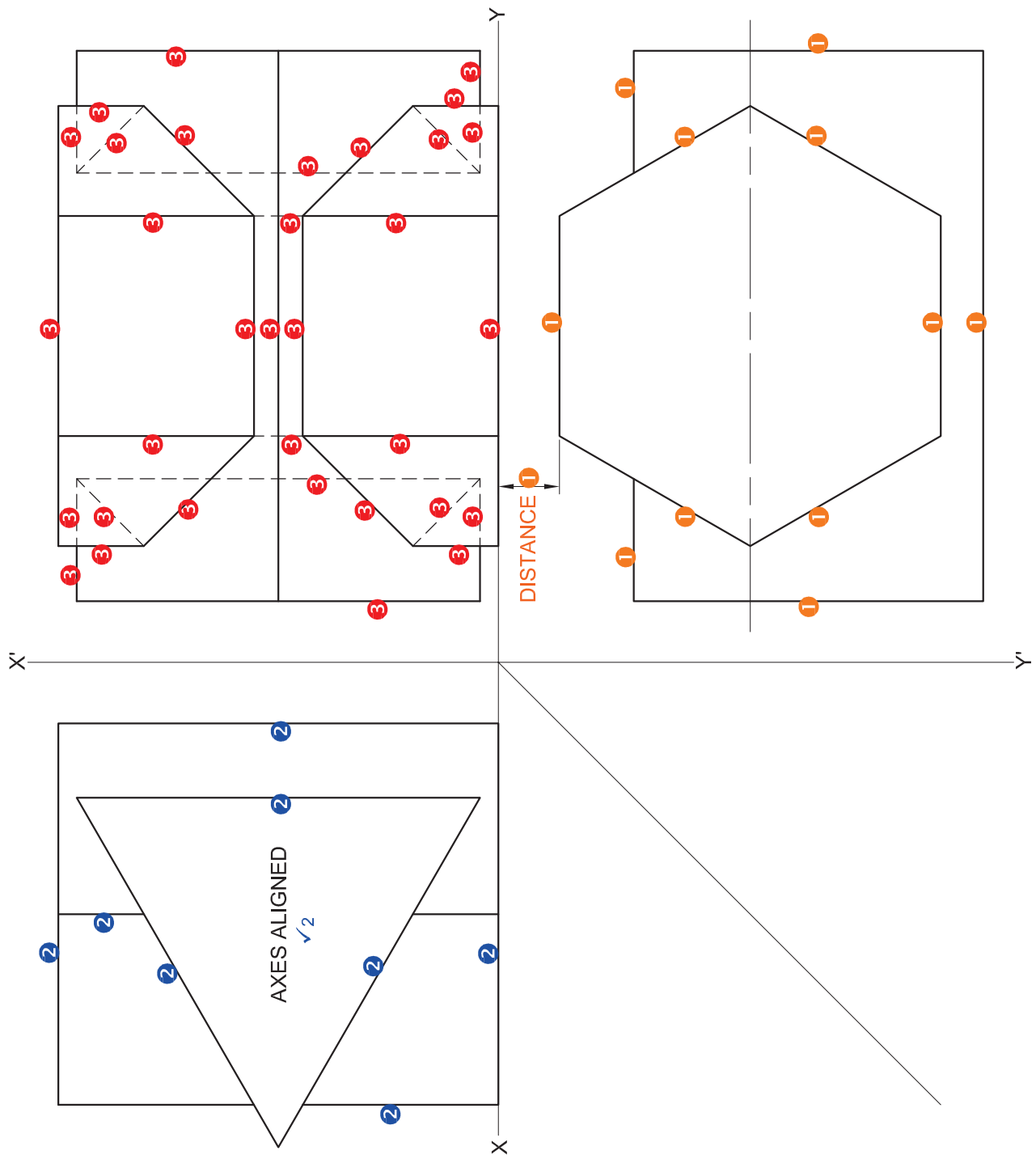
FREEHAND 0.5

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

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

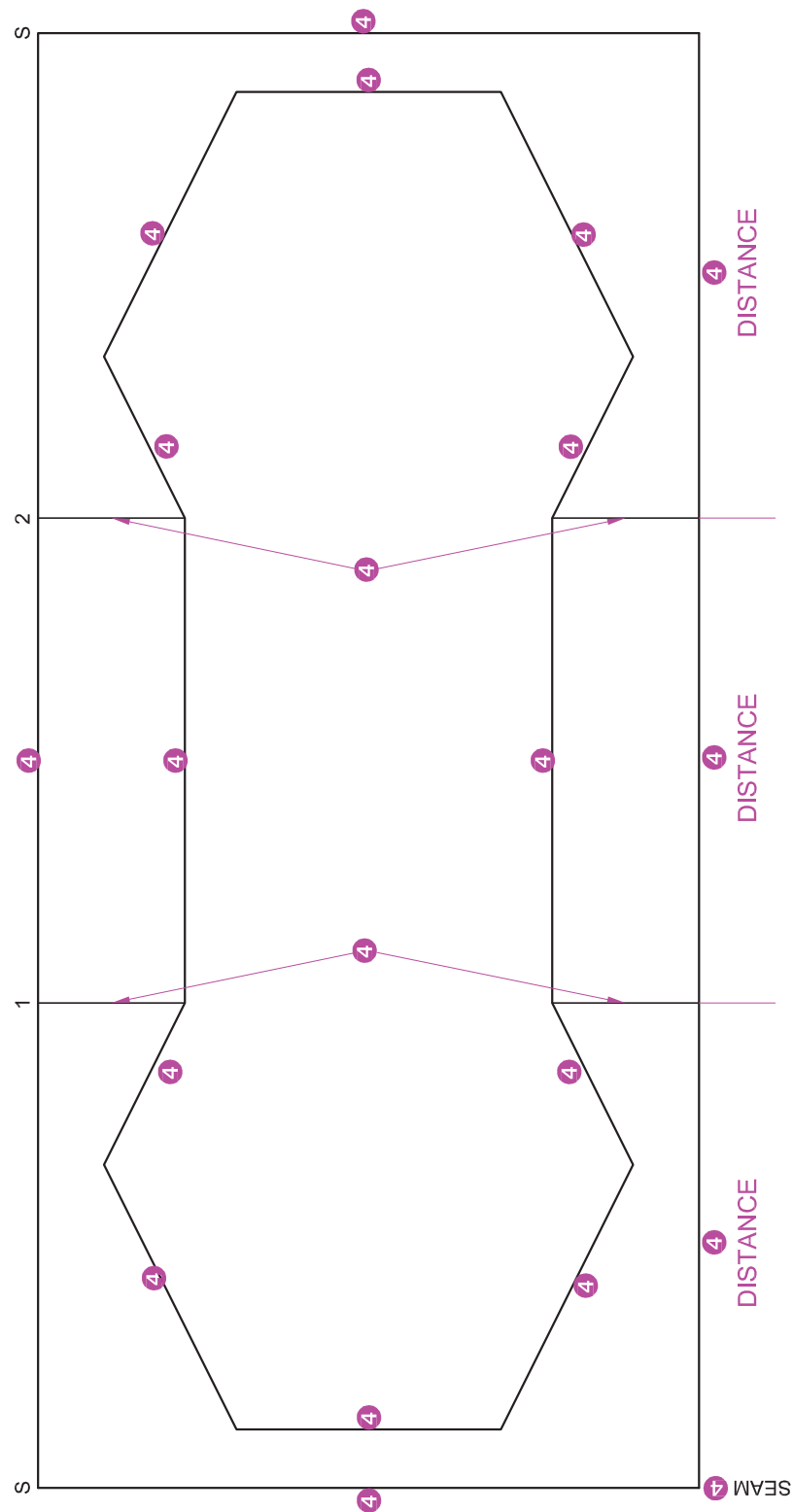
 PAPER 1 QUESTION 1
 GRADE 12
 NOVEMBER 2021
 MARKING GUIDELINE

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

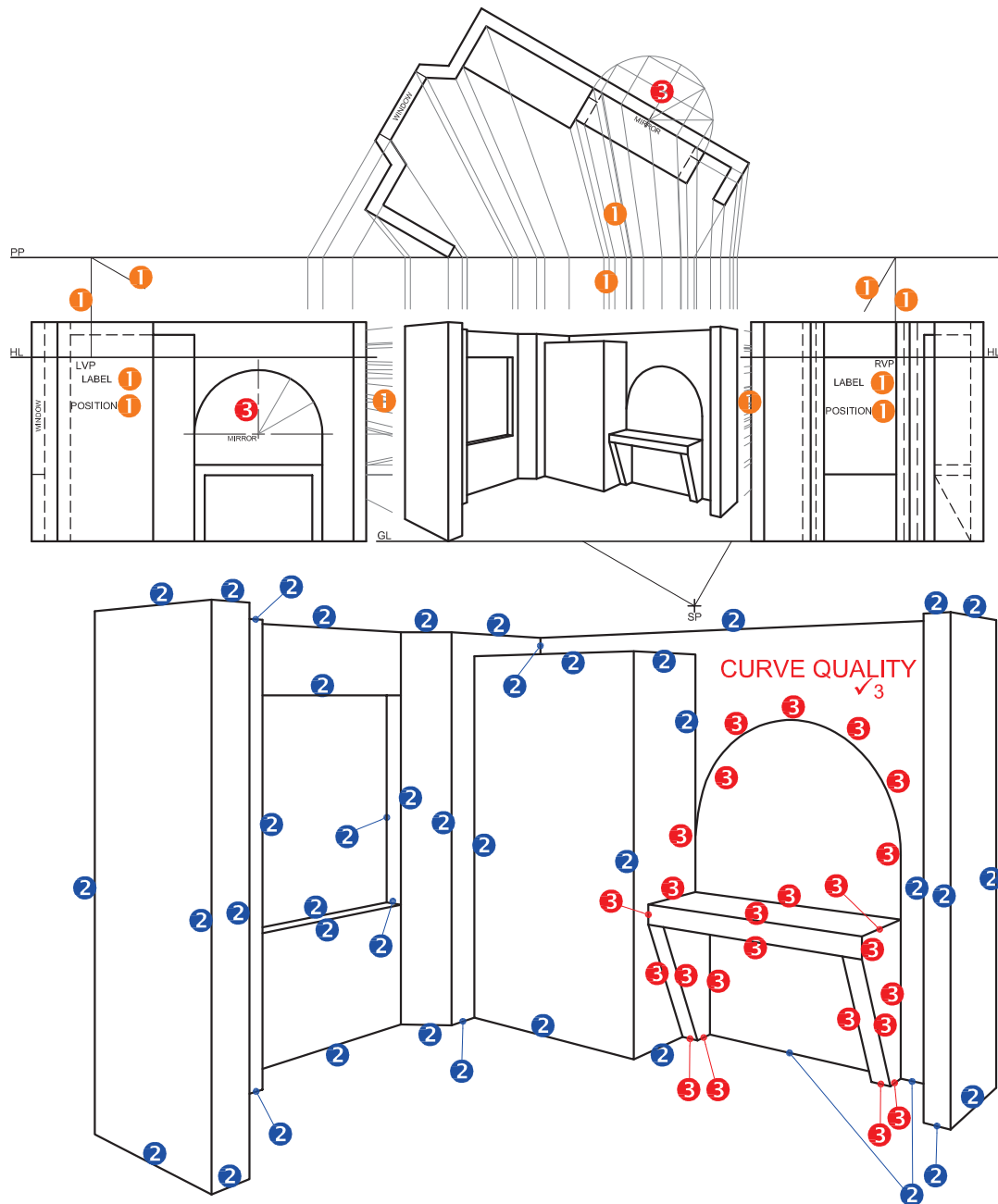


PAPER 1 QUESTION 2
GRADE 12
NOVEMBER 2021
MARKING GUIDELINE

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



PAPER 1 QUESTION 2
GRADE 12
NOVEMBER 2021
MARKING GUIDELINE



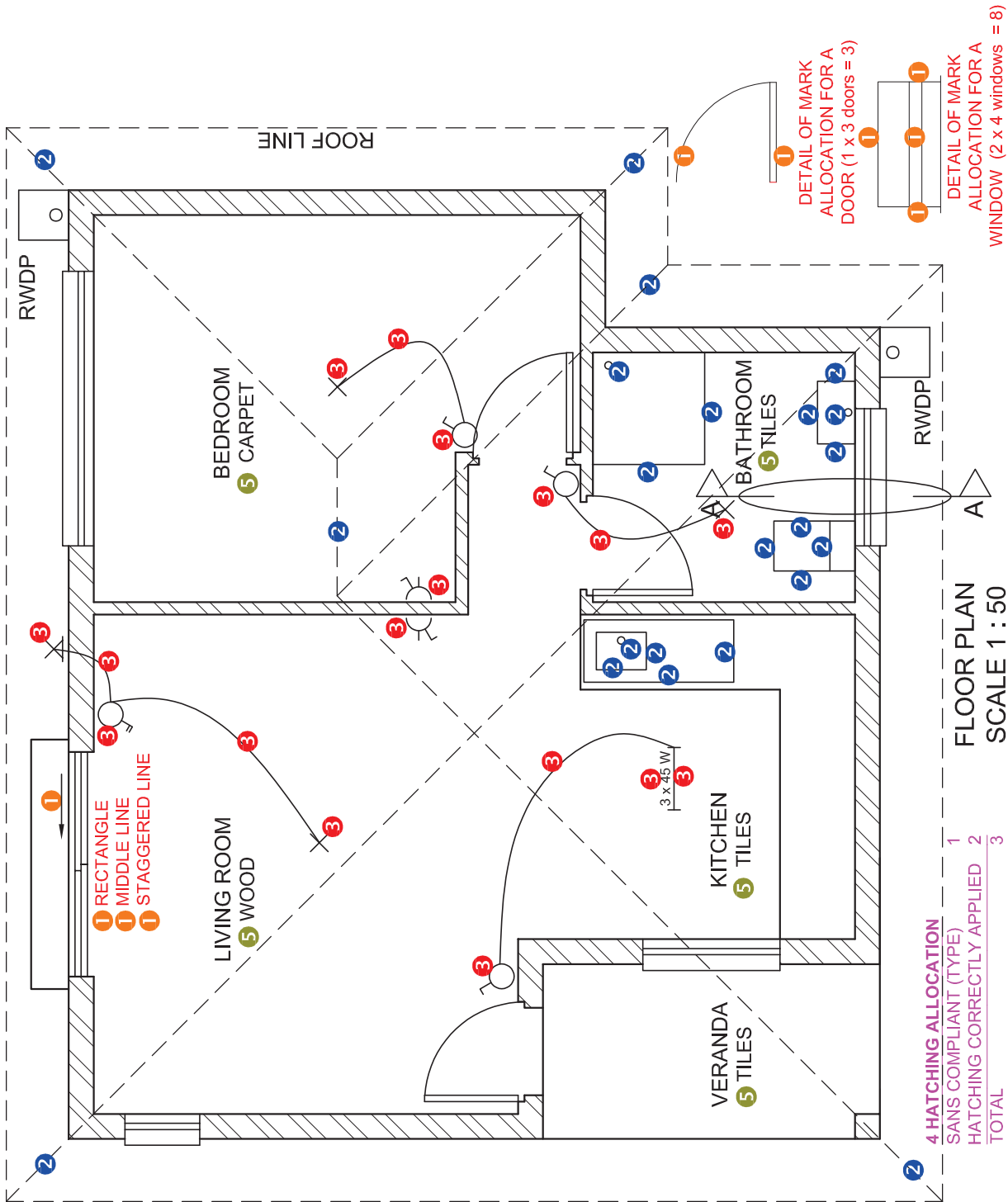
PAPER 1 QUESTION 3
GRADE 12
NOVEMBER 2021
MARKING GUIDELINE

ASSESSMENT CRITERIA

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

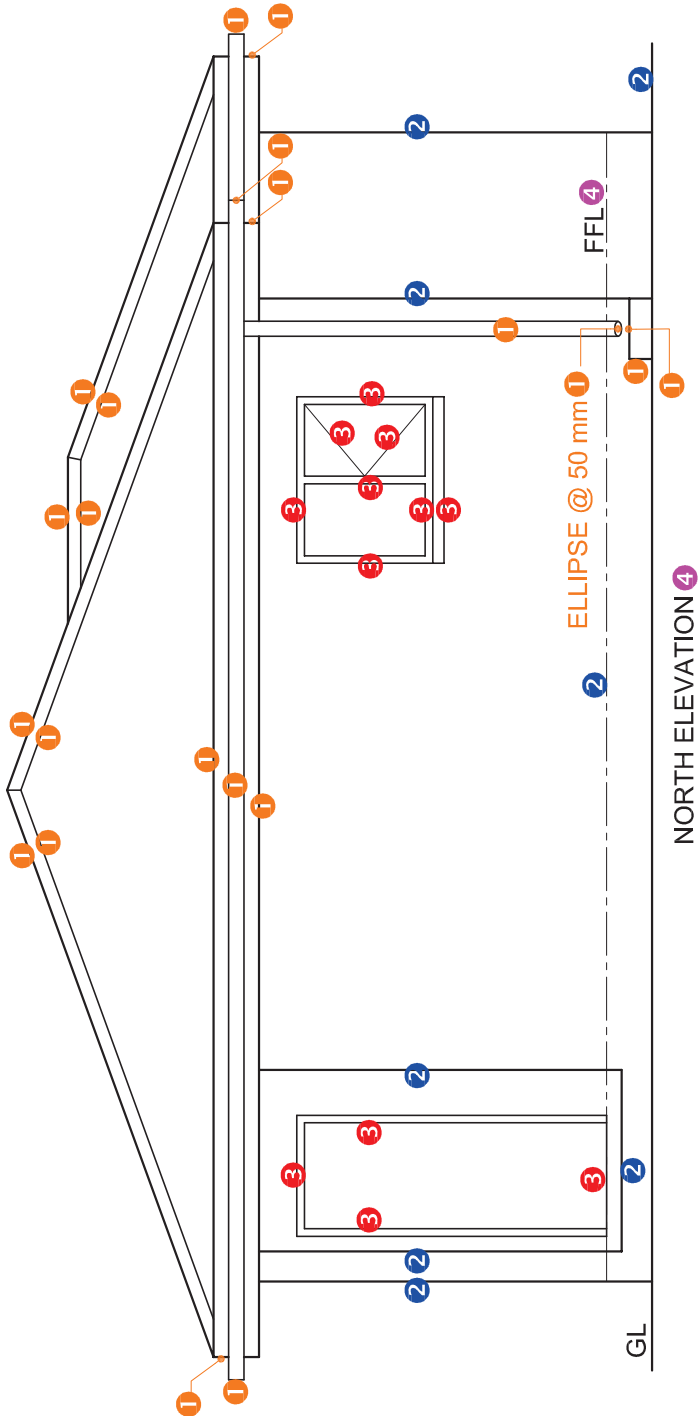
PAPER 1 QUESTION 4
GRADE 12
NOVEMBER 2021
MARKING GUIDELINE

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
2	WALLS + STEP + FFL
3	DOOR + WINDOW
4	LABELS
SUBTOTAL	
21 1 2	

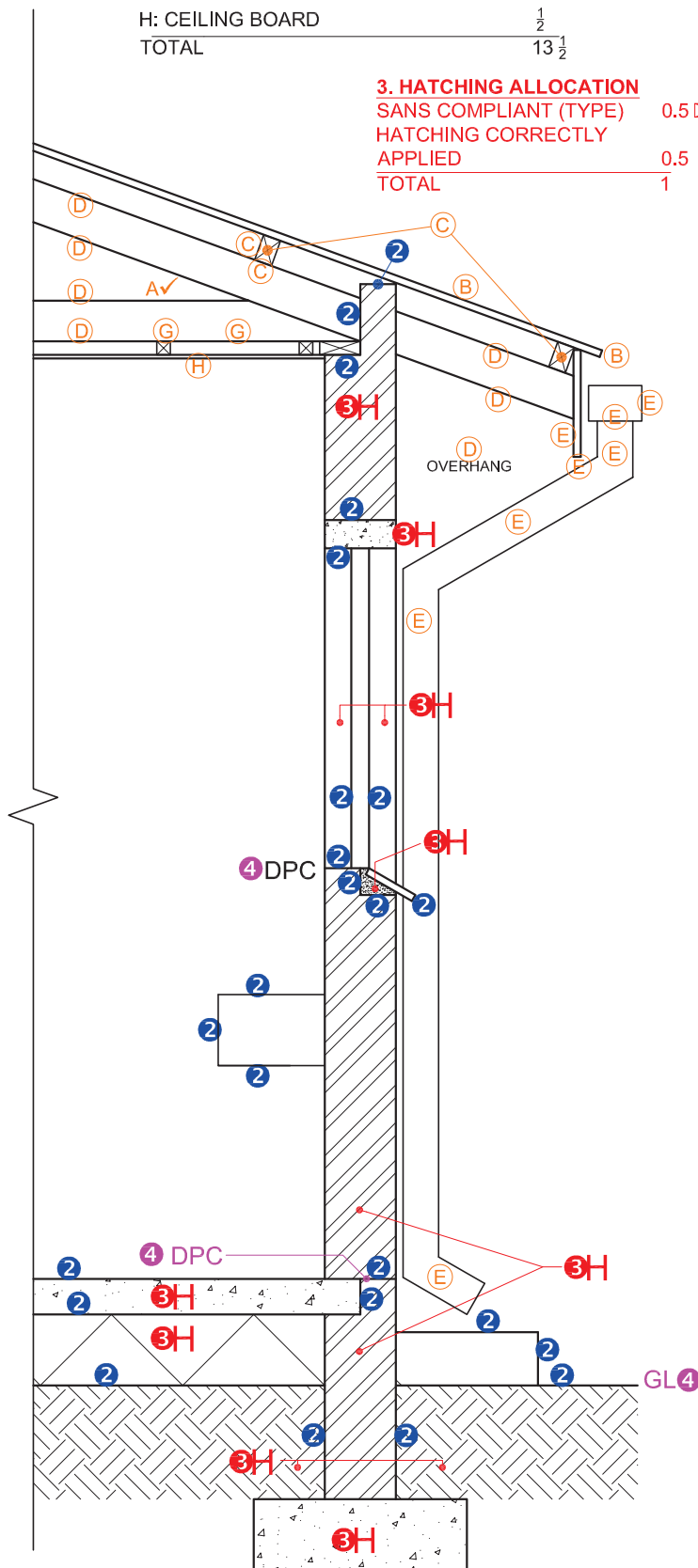


1. MARK ALLOCATION FOR ROOF

A: ROOF ANGLE	1
B: ROOF SHEET	1
C: PURLIN + SPACING	$1\frac{1}{2}$
D: TRUSS + OVERHANG	$3\frac{1}{2}$
E: FASCIA BOARDS, GUTTER + RWDP	4
F: WALL PLATE	1
G: BRANDING + SPACING	1
H: CEILING BOARD	$\frac{1}{2}$
TOTAL	$13\frac{1}{2}$

3. HATCHING ALLOCATION

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



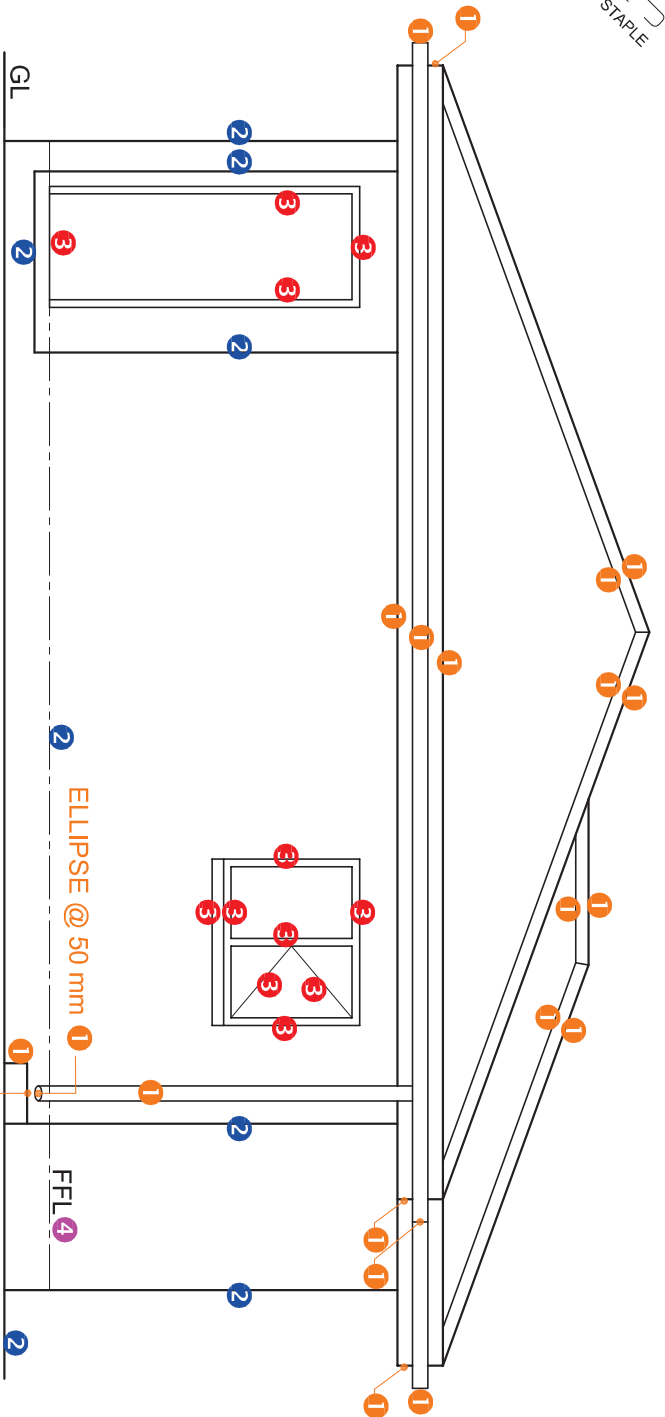
SECTION A-A
SCALE 1 : 20

PAPER 1 QUESTION 4
GRADE 12
NOVEMBER 2021
MARKING GUIDELINE

**ASSESSMENT
CRITERIA**

DETAILED SECTION

1	ROOF DETAIL	$13\frac{1}{2}$
2	SLAB, WALL, WINDOW + BASIN	12
3	HATCHING	$5\frac{1}{2}$
4	LABELS	$1\frac{1}{2}$
SUBTOTAL		$32\frac{1}{2}$



- 1. MARK ALLOCATION FOR ROOF**
- A: ROOF ANGLE
 - B: ROOF SHEET
 - C: PURLIN + SPACING
 - D: TRUSS + OVERHANG
 - E: FASCIA BOARDS, GUTTER + RWDP
 - F: WALL PLATE
 - G: BRANDING + SPACING
 - H: CEILING BOARD

TOTAL 13 1/2

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

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			
F			
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

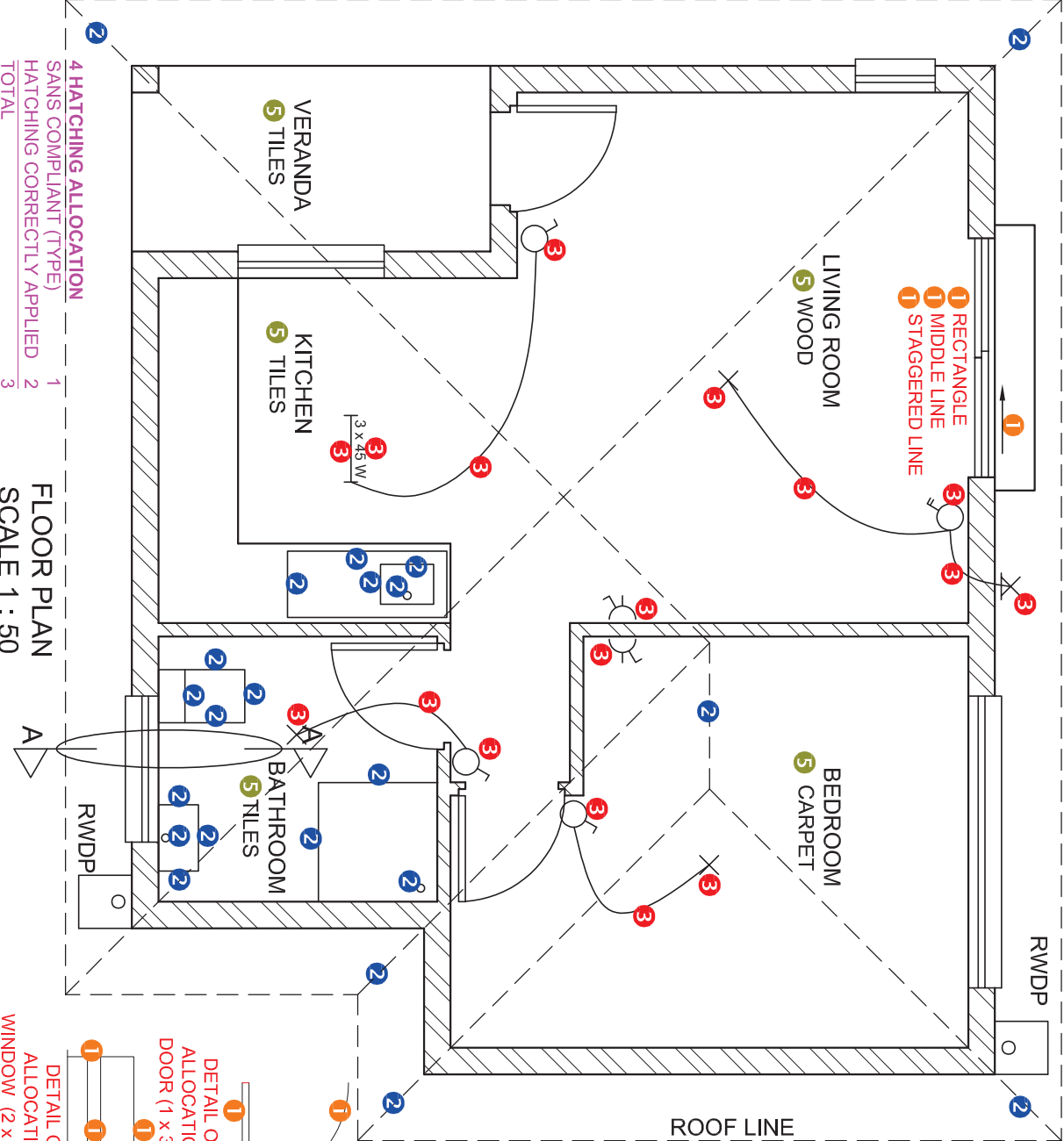
PENALTIES (-)

GRAND TOTAL

EXAMINATION NUMBER

EXAMINATION NUMBER

6



4 HATCHING ALLOCATION
SANS COMPLIANT (TYPE)
HATCHING CORRECTLY APPLIED
TOTAL 1 2 3

FLOOR PLAN
SCALE 1 : 50

DETAIL OF MARK ALLOCATION FOR A WINDOW (2 x 4 windows = 8)

SECTION A-A
SCALE 1 : 20