



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

SENIOR CERTIFICATE EXAMINATIONS/ NATIONAL SENIOR CERTIFICATE EXAMINATIONS

ENGINEERING GRAPHICS AND DESIGN P1

2023

MARKING GUIDELINES

MARKS: 100

These marking guidelines consist of 7 pages.

ANSWERS		
1	84-0213	1
2	EXPRESS PRINTERS	1
3	PALISADE	1
4	STONE HILL	1
5	1 : 900	1
6	COMPUTER CENTRE / -BUILDING	1
7	4	1
8	ASPHALT	1
9	INSPECTION EYE	1
10	PALM TREE	1
11	GENERATOR	1
12	EAST	1
13	7500 I	2
14	100-YEAR FLOOD LINE	2
15	WATER CLOSET	1
16	BLACK	1
17	18,6	2
18		3
19	See below	3
20		4
TOTAL		30

ANSWER 18

Show ALL calculations.

ADDING OF SIDES (+, +, ...), i.e.: ✓

$$P = GD + DE + EF + FG$$

$$= (50.5 + 33.4 + 36.6 + 30.4) - (3 \times 4)$$

$$= 138.9 \text{ m}$$

CONVERTED TO METERS ✓

ANSWER 19

Show ALL calculations.

APPLYING CORRECT FORMULA, i.e.: ✓

$$A = L \times B$$

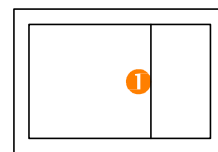
$$= [(21 \times 25) + (29 \times 7)] - (11 \times 18)$$

$$= 728 - 198$$

$$= 530 \text{ m}^2$$

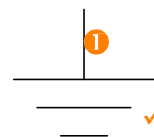
ANSWER 20

20.1

OUTER RECTANGLE ✓
INNER RECTANGLE ①

① FREEHAND FOR BOTH

20.2



The drawing illustrates the construction of the development of a truncated pentagonal pyramid. It consists of three main parts: the front view, the top view, and the development.

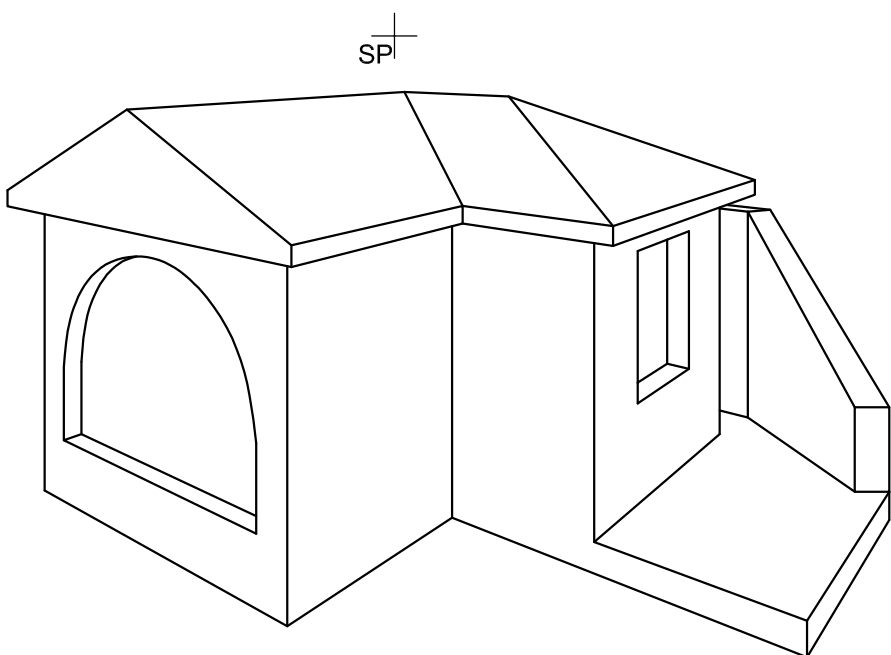
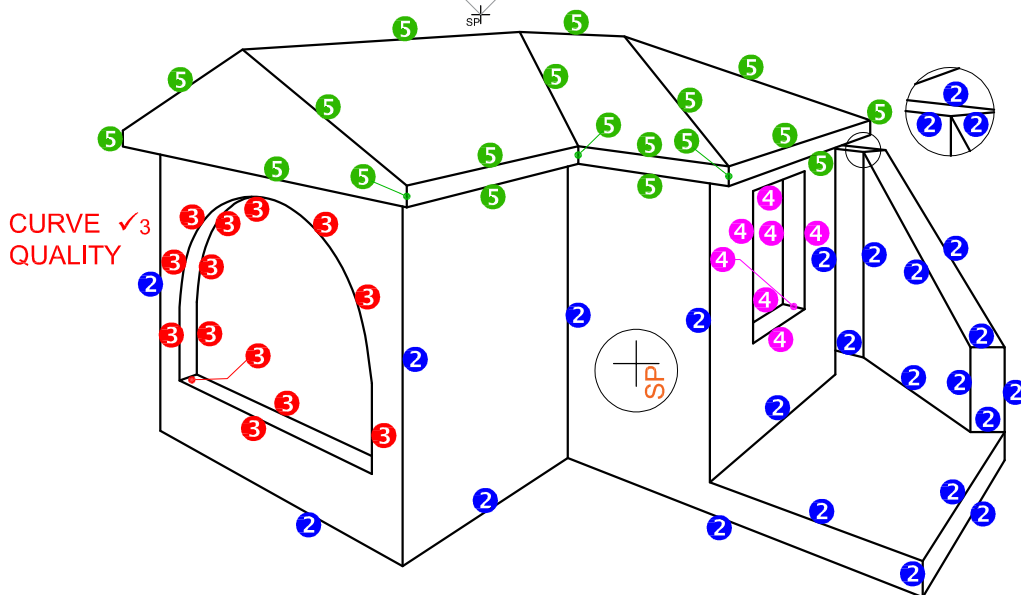
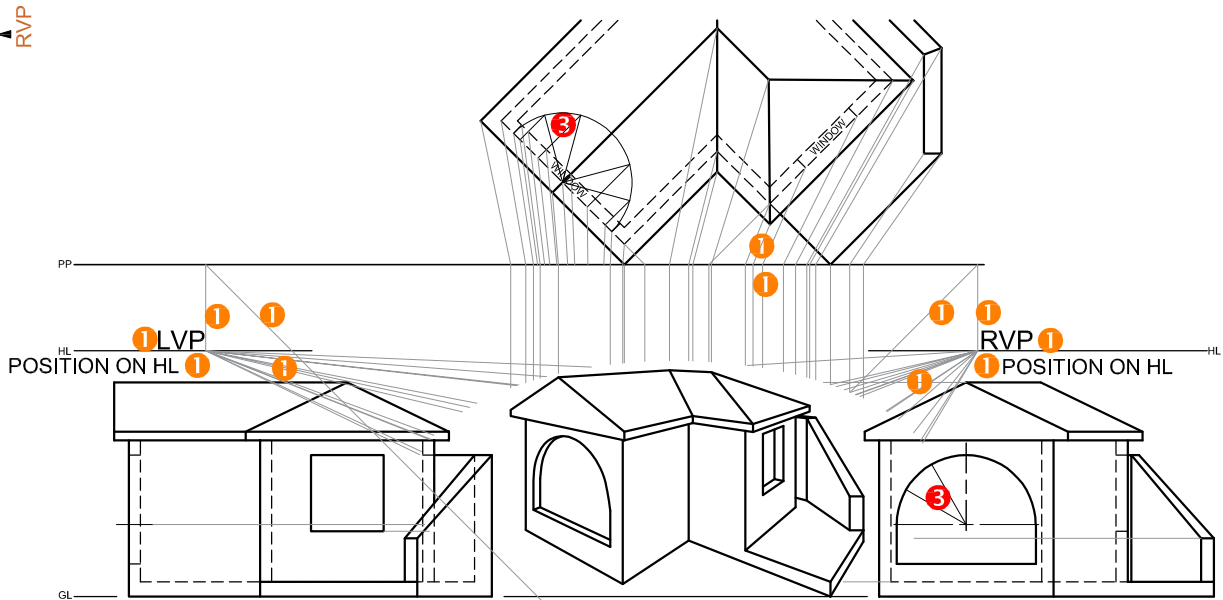
- Front View:** A trapezoidal shape with a height of 10. It is divided into four equal vertical spaces. The top edge is a pentagon. Marking points are labeled with blue '2's.
- Top View:** A regular pentagon with a center point. Marking points are labeled with blue '2's.
- Development:** A sector of a circle divided into four equal angular spaces. The radii are labeled with blue '2's.

Additional construction details and labels include:

- START AT AB:** A label at the bottom left of the development.
- 4 EQUAL SPACES:** A label at the bottom left of the development.
- LINE + LENGTH:** A label at the bottom left of the development.
- NOT REQUIRED:** A label pointing to a dashed line in the top view.
- CENTRE POINT:** A label pointing to the center of the top view.
- AUXILIARY VIEW CORRECTLY ROTATED:** A label pointing to a rotated auxiliary view.
- T + B:** Labels indicating the top and bottom edges of the development.
- 3:** Marking points on the development.
- 1:** Marking points on the development.
- 4:** Marking points on the development.
- X, Y, X', Y':** Reference axes for the views.

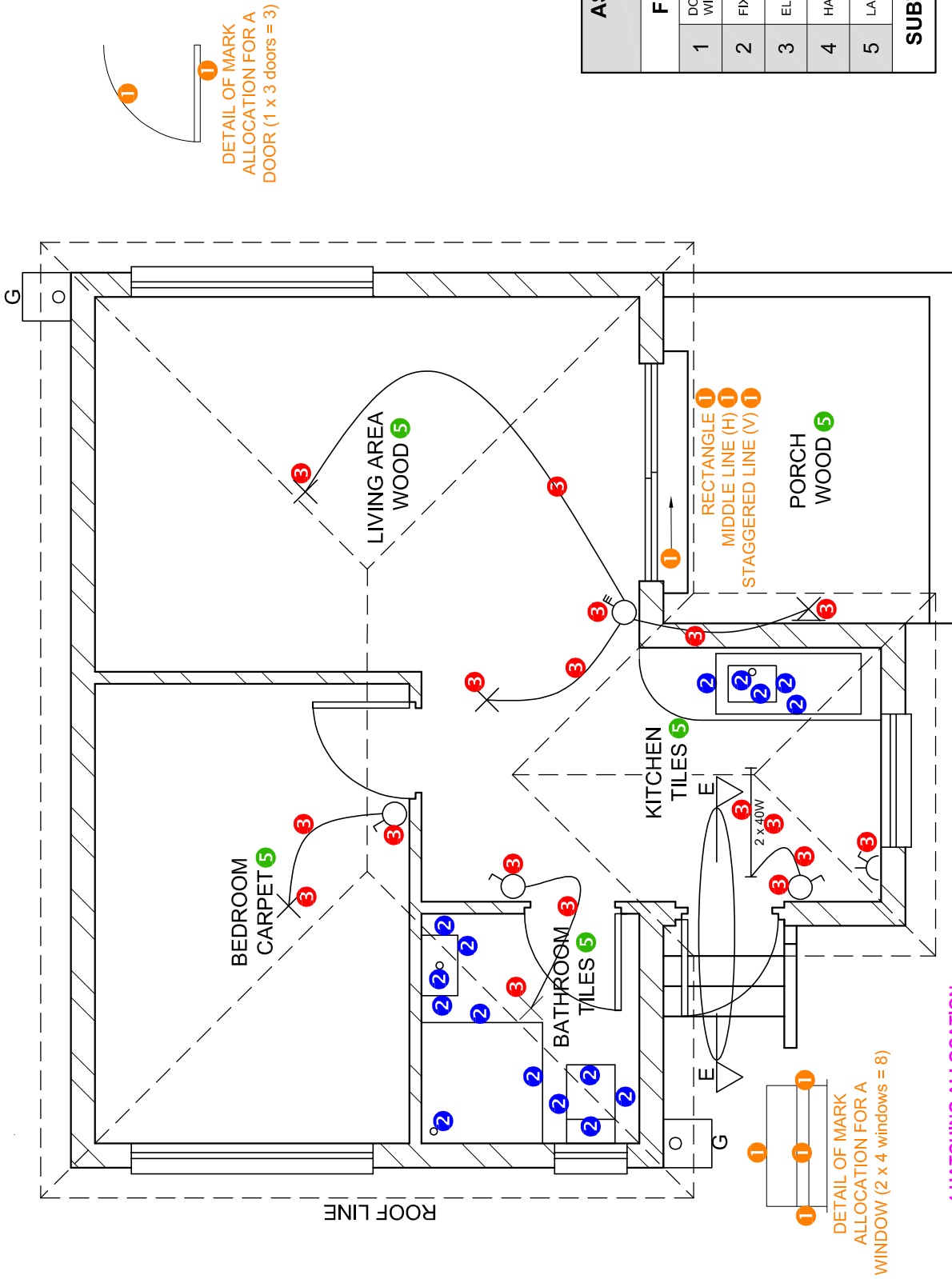
ASSESSMENT CRITERIA	
1	TOP VIEW 6 1/2
2	FRONT VIEW 11 1/2
3	LEFT VIEW 12 1/2
4	DEVELOPMENT 7 1/2
TOTAL 38	

PAPER 1 QUESTION 2
 GRADE 12
 2023
 MARKING GUIDELINES



ASSESSMENT CRITERIA		
1	CONSTRUCTION	6
2	STOEP + WALLS	12 1/2
3	ARCH + CONSTR	8 1/2
4	WINDOW	3 1/2
5	ROOF	9 1/2
TOTAL		40

PAPER 1 QUESTION 3
 GRADE 12
 2023
 MARKING GUIDELINES

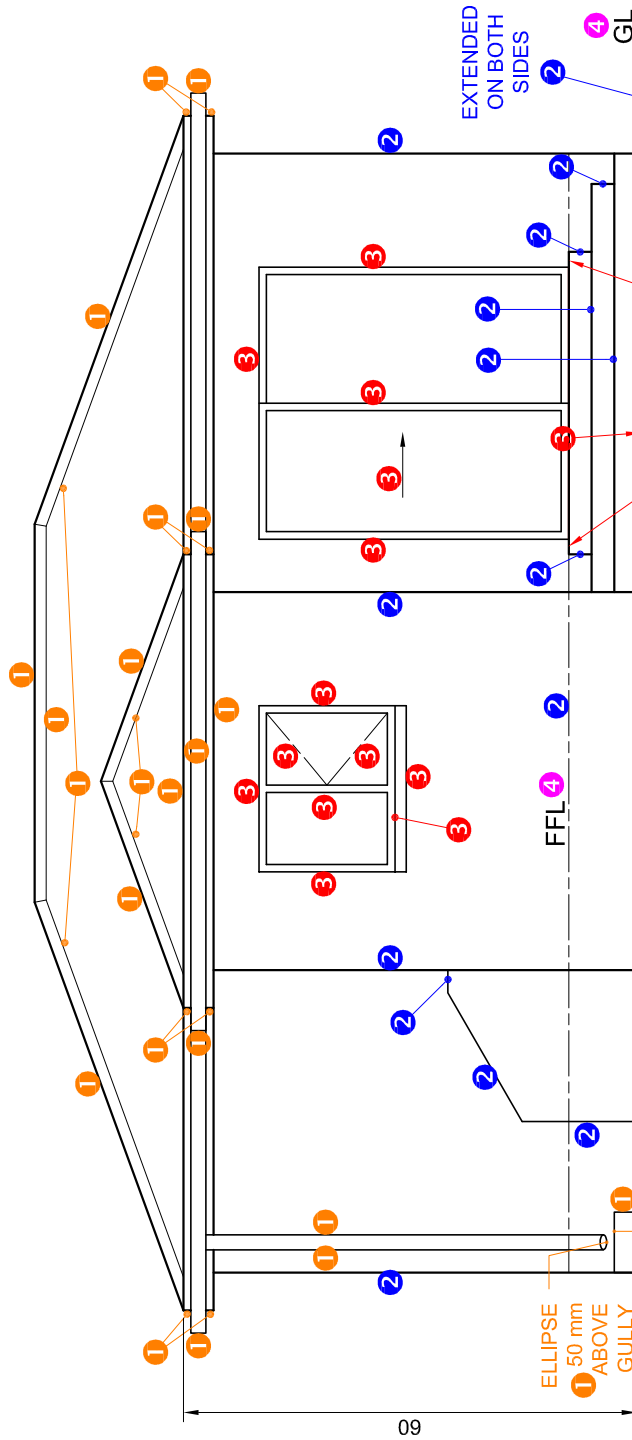


ASSESSMENT CRITERIA	
FLOOR PLAN	
1	DOORS + WINDOWS 13
2	FIXTURES 8
3	ELECTRICAL 9
4	HATCHING 3
5	LABELS 2 1/2
SUBTOTAL	35 1/2

PAPER 1 QUESTION 4
GRADE 12
2023
MARKING GUIDELINES

FLOOR PLAN
SCALE 1 : 50

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



SOUTH ELEVATION
 BOTTOM OF DOOR CAN ONLY BE ALLOCATED IF THE LINE IS EXTENDED TO VERTICAL LINES

ASSESSMENT CRITERIA	
SOUTH ELEVATION	
1	ROOF + RWDP + GULLY
2	WALLS + FFL
3	DOOR + WINDOW
4	LABELS
SUBTOTAL	
	27

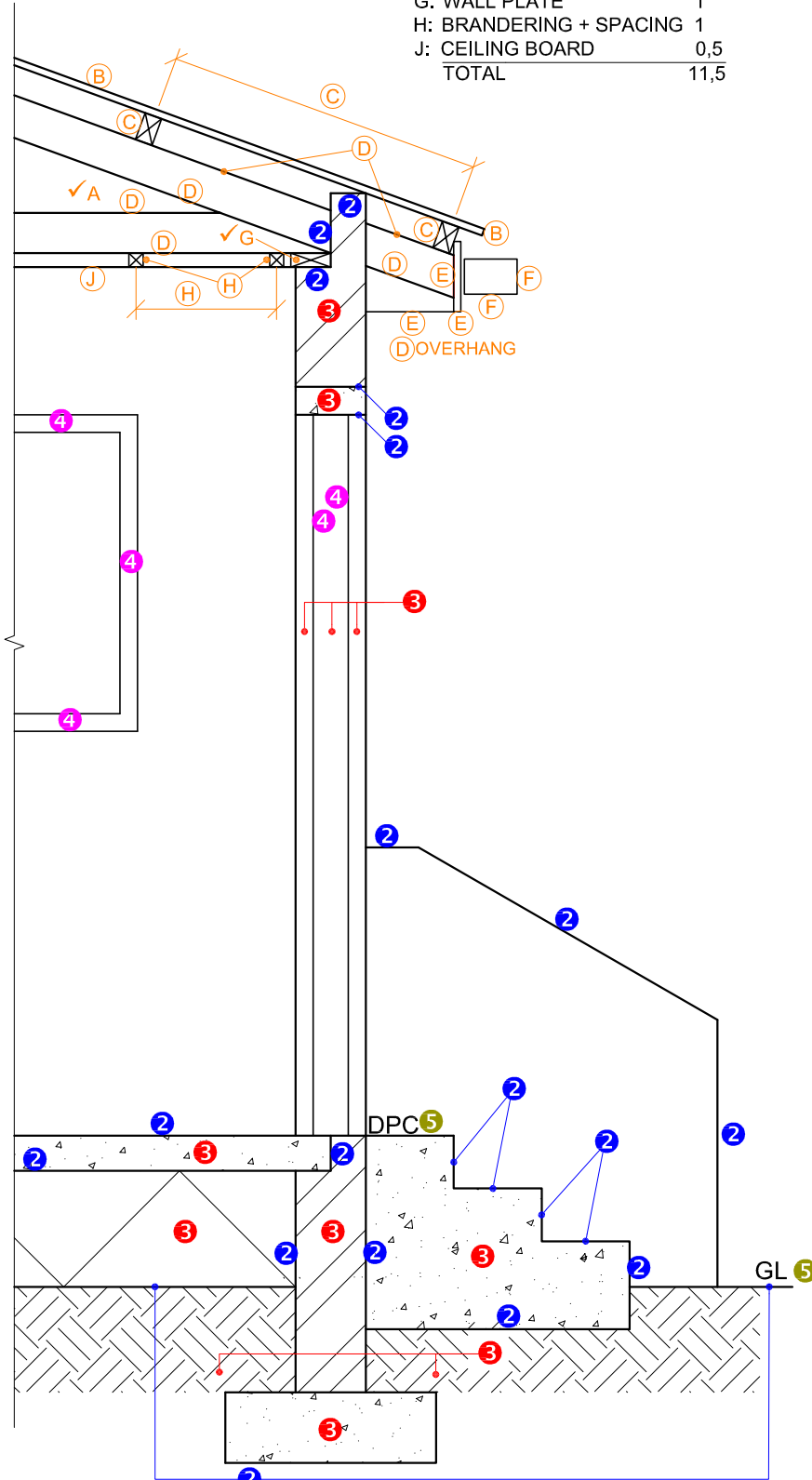
PAPER 1 QUESTION 4
 GRADE 12
 2023
 MARKING GUIDELINES

3. HATCHING ALLOCATION

SANS COMPLIANT	0.5
HATCHING CORRECTLY APPLIED	0.5
TOTAL	1

1. MARK ALLOCATION FOR ROOF

A: ROOF ANGLE	1
B: ROOF SHEET	1
C: PURLIN + SPACING	1,5
D: TRUSS + OVERHANG	3
E: FACIA	1,5
F: GUTTER	1
G: WALL PLATE	1
H: BRANDERING + SPACING	1
J: CEILING BOARD	0,5
TOTAL	11,5



SECTION ON E-E
SCALE 1 : 20

ASSESSMENT CRITERIA		
DETAILED SECTION		
1	ROOF DETAIL	11 1/2
2	SLAB + WALL + STEP	9
3	HATCHING	5 1/2
4	WINDOW + DOOR	2 1/2
5	LABELS	1
SUBTOTAL		29 1/2

PAPER 1 QUESTION 4
GRADE 12
2023
MARKING GUIDELINES