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**SA EXAM
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basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

**NATIONAL
SENIOR CERTIFICATE**

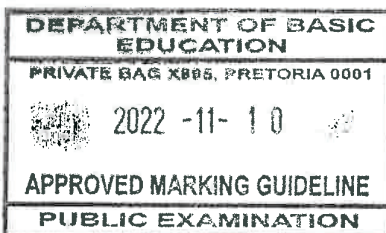
GRADE 12

ENGINEERING GRAPHICS AND DESIGN P1

NOVEMBER 2022

MARKING GUIDELINES

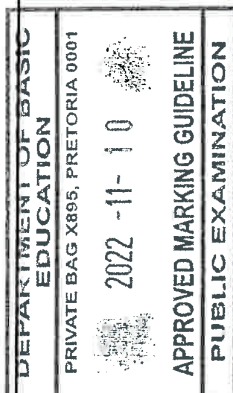
MARKS: 100



These marking guidelines consist of 8 pages.

10 Nov 2022

AB

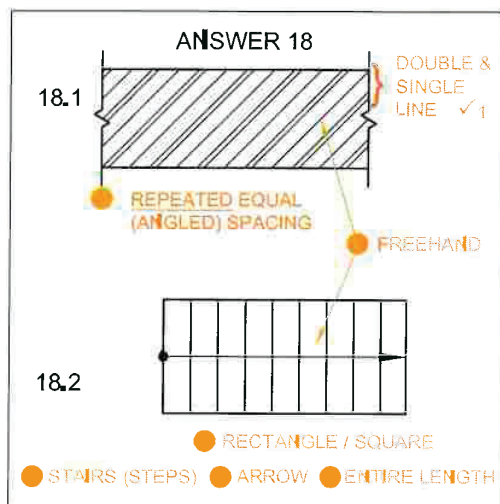


ANSWERS		
1	PROJECT NUMBER	1
2	MR N KEENAN	1
3	SITE PLAN	1
4	PRINTING	1
5	LISA B	1
6	15000	1
7	ARCHITECT and CLIENT / MR N KEENAN	2
8	2	1
9	RAINWATER DOWN-PIPE	1
10	E	1
11	4,57	1
12	NEW ✓ IRON / STEEL ✓	2
13	NORTH POINT	1
14	SWING / OPENING OF THE GATES	1
15	WATT METER / ELECTRICAL METER	1
16	FALL / GRADIENT / SLOPE / DROP	1
17	SOUTH WEST / SW	2
18		4
19	See below	3
20		3
	TOTAL	30

AB

B

my



ANSWER 19
Show ALL calculations.
APPLYING CORRECT FORMULA ✓
 $P = AB + BC + CD + DE$

 $= AB + BC + CD + DE (- \text{GATE})$
 $= (24,23 + 8,37 + 18,38 + 31,2) - 3,6$
 $= 78,58$ ✓ ANSWER IN METRES ✓

ANSWER 20
Show ALL calculations.
APPLYING CORRECT FORMULA ✓
 $A = L \times B$

 $= (10,8 \times 6) + (13,2 \times 6) + (6,7 \times 6,7)$
 $= 64,8 + 79,2 + 44,89$
 $= 188,89$ ✓ m^2
 ANSWER IN SQUARE METRES AND m^2 SHOWN ✓

PAPER 1 QUESTION 1
GRADE 12
NOVEMBER 2022
MARKING GUIDELINES

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Please turn over

CONSTRUCTION
SIZE 37 mm ✓/2
SHAPE 72° ✓/2

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EDUCATION
PRIVATE BAG X895, PRETORIA 0001
2022 -11- 10
APPROVED MARKING GUIDELINE
PUBLIC EXAMINATION

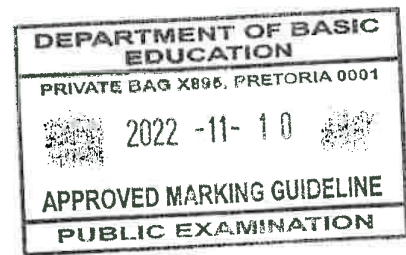
CONSTRUCTION
SHAPE 45° ✓/1

ASSESSMENT CRITERIA

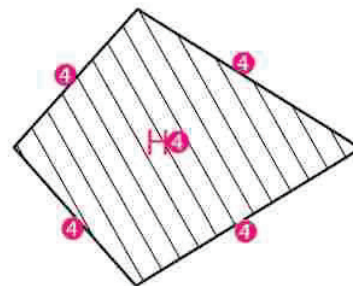
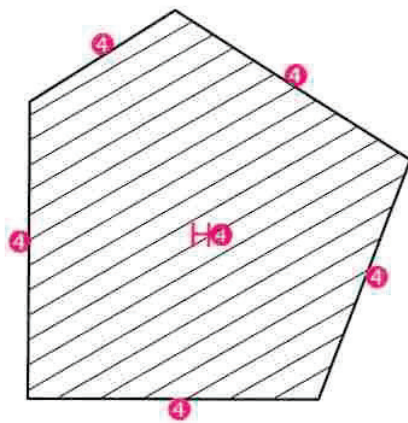
1	FRONT VIEW	7
2	SECTIONAL TOP VIEW	12 1/2
3	SECTIONAL RIGHT VIEW	10
SUBTOTAL		29 1/2

Turn over for true shape

PAPER 1 QUESTION 2
GRADE 12
NOVEMBER 2022
MARKING GUIDELINES

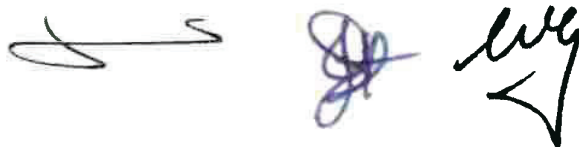


TRUE SHAPE
ANY RECOGNISED METHOD ✓4



5. NOTE ON CORRECT HATCHING
DIFFERENT DIRECTIONS ✓5

AB

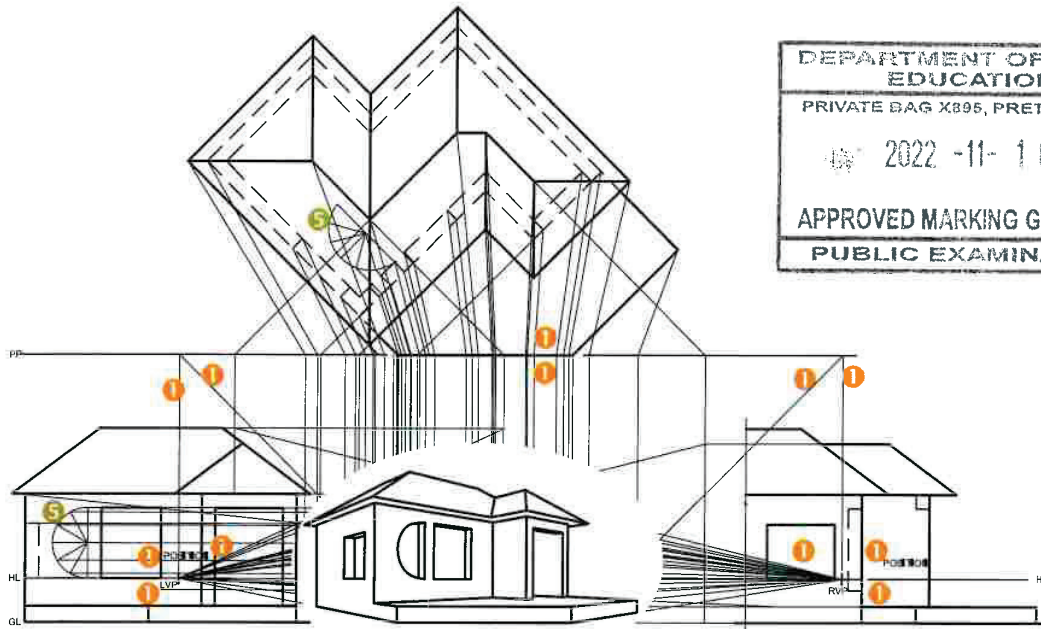


ASSESSMENT CRITERIA		
4	TRUE SHAPE	6 $\frac{1}{2}$
5	CORRECT HATCHING	1
SUBTOTAL		7 $\frac{1}{2}$

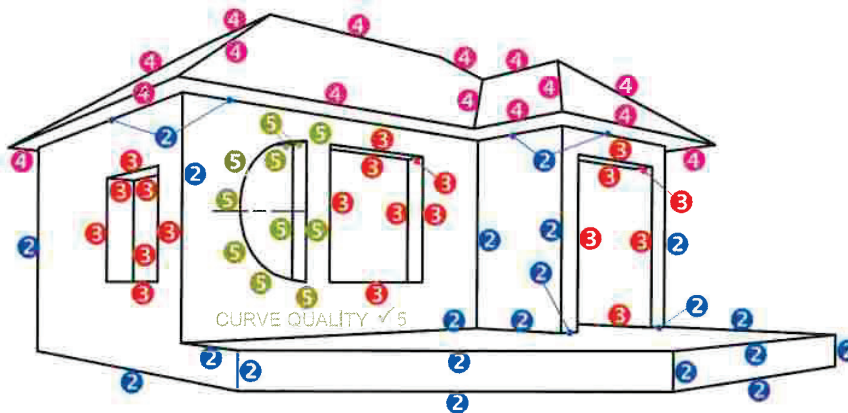
PAPER 1 QUESTION 2
GRADE 12
NOVEMBER 2022
MARKING GUIDELINES

RVP

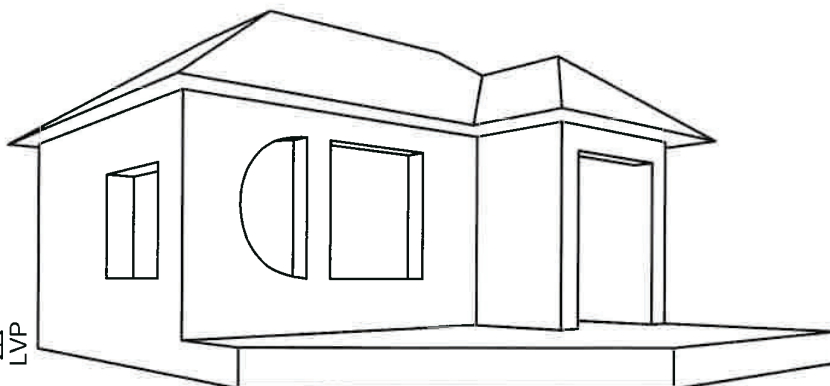
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SP



SP



ASSESSMENT CRITERIA

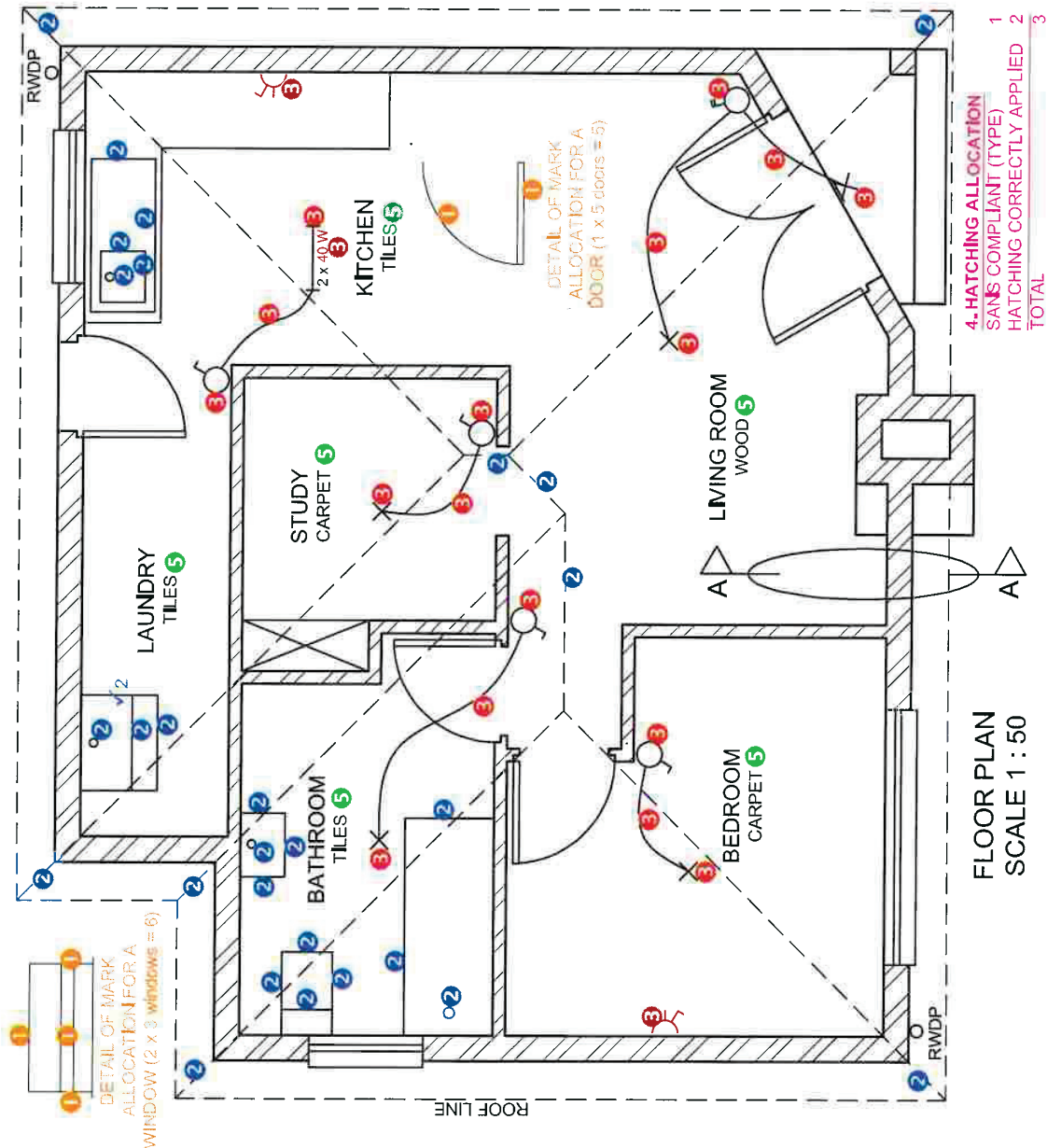
1	CONSTRUCTION	6
2	WALL + BASE	10 1/2
3	WINDOWS + OPENING	10
4	ROOF	7 1/2
5	ARC	7
TOTAL		41

PAPER 1 QUESTION 3
GRADE 12
NOVEMBER 2022
MARKING GUIDELINES

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ASSESSMENT CRITERIA		POSSIBLE
FLOOR PLAN		
1	DOORS + WINDOWS	11
2	FIXTURES + ROOF LINES	15
3	ELECTRICAL	10
4	HATCHING	3
5	LABELS	3
SUBTOTAL		42

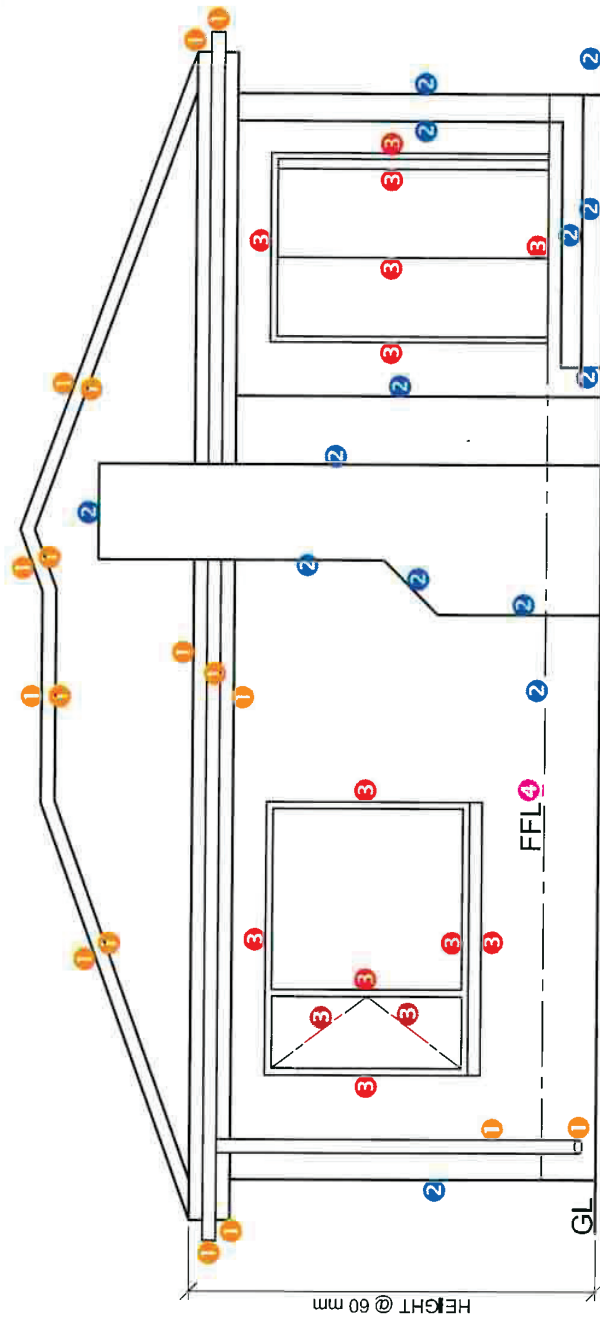
PAPER 1 QUESTION 4
GRADE 12
NOVEMBER 2022
MARKING GUIDELINE

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ASSESSMENT CRITERIA	
SOUTH ELEVATION	
1	ROOF + RWDP 8 1/2
2	WALLS + STEP + CHIMNEY + FFL 7
3	DOOR + WINDOW 7
4	LABELS 1
SUBTOTAL	
23 1/2	

AB

2

leg

1. MARK ALLOCATION FOR ROOF

A: ROOF ANGLE	1
B: ROOF SHEET	1
C: PURLIN + SPACING	1,5
D: TRUSS + OVERHANG	3,5
E: FASCIA BOARD + GUTTER	2
F: WALL PLATE	1
G: BRANDING + SPACING	1
H: CEILING BOARD	0,5
TOTAL	11,5

3. HATCHING FOR ROUGH TIMBER

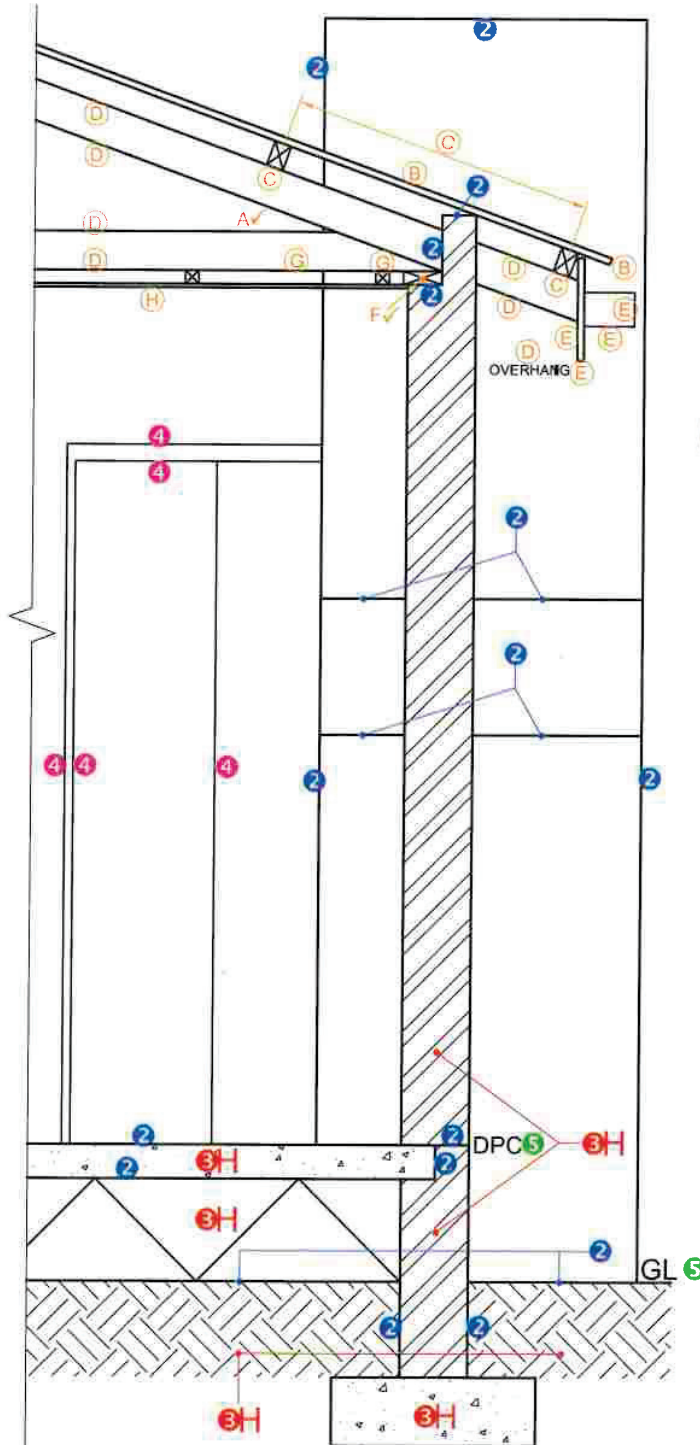
SANS COMPLIANT (TYPE) 0.5



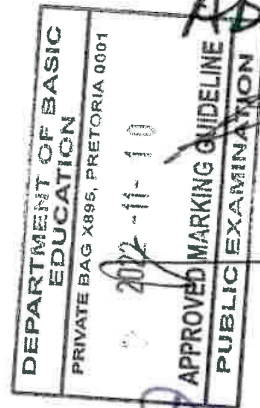
HATCHING CORRECTLY

APPLIED 0.5

TOTAL 1



SECTION A-A
SCALE 1 : 20



leg

ASSESSMENT CRITERIA**DETAILED SECTION**

1	ROOF DETAIL	11 $\frac{1}{2}$
2	SLAB + WALL + CHIMNEY	8
3	HATCHING	3 $\frac{1}{2}$
4	DOOR	2 $\frac{1}{2}$
5	LABELS	1
SUBTOTAL		26 $\frac{1}{2}$

PAPER 1 QUESTION 4
GRADE 12
NOVEMBER 2022
MARKING GUIDELINE



ASSESSMENT CRITERIA
FLOOR PLAN

SOUTH ELEVATION				
1	ROOF + RWDP	8 $\frac{1}{2}$		
2	WALLS + STEP CHIMNEY + FFL	7		
3	DOOR + WINDOW	7		
4	LABELS	1		
SUBTOTAL		23 $\frac{1}{2}$		

DETAILED SECTION			
1	ROOF DETAIL	11 1/2	
2	SLAB + WALL + CHIMNEY	8	
3	HATCHING	3 1/2	
4	DOOR	2 1/2	
5	LABELS	1	
SUBTOTAL		20 1/2	
TOTAL		92	
PENALTIES (+)			
GRAND TOTAL			

1000 JOURNAL OF CLIMATE