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basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

**NATIONAL
SENIOR CERTIFICATE**

GRADE 12

ENGINEERING GRAPHICS AND DESIGN P1

NOVEMBER 2024

MARKING GUIDELINES

MARKS: 100

These marking guidelines consist of 7 pages.

ANSWERS

1	DRAWING NUMBER	1
2	D BRITS	1
3	CHEETAH PRINTERS	1
4	POLOKWANE	1
5	ADD WATER TANK	1
6	1173,5	1
7	BUILDING LINE	1
8	WILLOW TREE	1
9	2000	1
10	TO BE REMOVED / DEMOLISHED	1
11	WATER STORAGE TANK	1
12	PAVERS	1
13	BUILT-IN CUPBOARD	1
14	BROWN	1
15	16,58 ✓ CONVERTED TO METRES ✓	2
16	NORTH-EAST / NE	2
17	22	2
18		3
19	See below	3
20		4
	TOTAL	**30**

ANSWER 18
Show ALL calculations.
ADDING OF SIDES (+, +, ...) ✓

P = AB + BC + CF + FA

= (76,77 + 63,34 + 76,77 + 63,34)

= 280,22 ✓   CONVERTED TO METRES ✓

ANSWER 19
Show ALL calculations.
APPLYING CORRECT FORMULA ✓

A = L x B
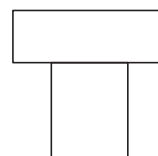
= (17,5 x 9,6) + (3,5 x 10,7) +
   (7,7 x 1,5) + (10,7 x 2,4 / 2)

= 168 + 37,45 + 11,55 + 12,84

= 229.84 m² ✓✓

ANSWER 20.1

TOP RECTANGLE ✓
BOTTOM RECTANGLE ✓

BOTH IN ❶ FREEHAND

ANSWER 20.2
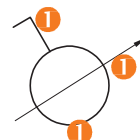
PAPER 1 QUESTION 1
GRADE 12
NOVEMBER 2024
MARKING GUIDELINES

    Please turn over

ASSESSMENT CRITERIA		
1	FRONT VIEW	$7\frac{1}{2}$
2	SECTIONAL TOP VIEW	$16\frac{1}{2}$
3	SECTIONAL LEFT VIEW	14
	TOTAL	**38**
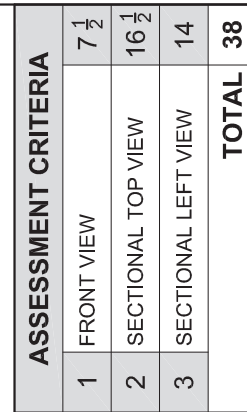
PAPER 1 QUESTION 2
GRADE 12
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MARKING GUIDELINES

CONSTRUCTION OF PRISM ❶

PLACEMENT OF PRISM ✓₁

CONSTRUCTION OF HEXAGON ✓₁

S

S

X

X₁

Y

Y₁

❶ = 10 mm

❶ BASE

RVP

PP

HL

POSITION ON HL

LVP

LABEL

HL

POSITION ON HL

RVP

LABEL

SP

GL

GL

SP

CURVE
CONSTRUCTION ✓5

CURVE
QUALITY ✓5

SP

LVP

ASSESSMENT CRITERIA		
1	CONSTRUCTION	6
2	FLOOR + STEPS	12
3	WINDOWS + DOOR	$9\frac{1}{2}$
4	ROOF	7
5	ARC	$5\frac{1}{2}$
	TOTAL	**40**

PAPER 1 QUESTION 3
GRADE 12
NOVEMBER 2024
MARKING GUIDELINES

ASSESSMENT CRITERIA	FLOOR PLAN	
1	DOORS + WINDOWS	14
2	FIXTURES	7
3	ELECTRICAL	$7\frac{1}{2}$
4	LABELS	2
5	HATCHING	3
	SUBTOTAL	$33\frac{1}{2}$

PAPER 1 QUESTION 4
GRADE 12
NOVEMBER 2024
MARKING GUIDELINES

FLOOR PLAN
SCALE 1 : 50

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

DETAIL OF MARK
ALLOCATION FOR A
DOOR (1 x 6 doors = 6)

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

OPEN AREA
TILE

PATIO
CONCRETE

BATHROOM
TILE

BEDROOM
CARPET

RWDP

ROOF LINE

2 x 40 W

G

A

A

NORTH-WEST ELEVATION
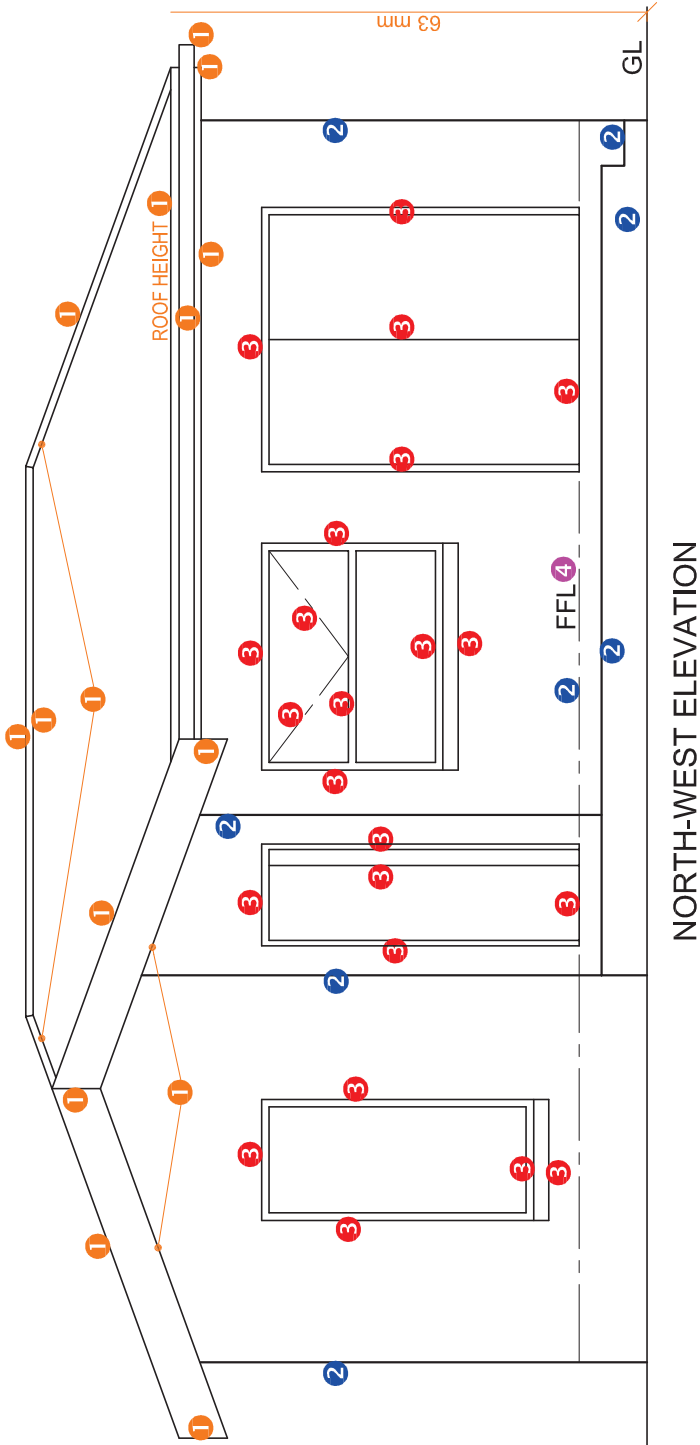
ASSESSMENT CRITERIA	NORTH-WEST ELEVATION	
1	ROOF + RWDP	$7\frac{1}{2}$
2	WALLS + STEPS	4
3	DOORS + WINDOWS	$11\frac{1}{2}$
4	LABELS	$\frac{1}{2}$
	SUBTOTAL	$23\frac{1}{2}$

PAPER 1 QUESTION 4
GRADE 12
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MARKING GUIDELINES
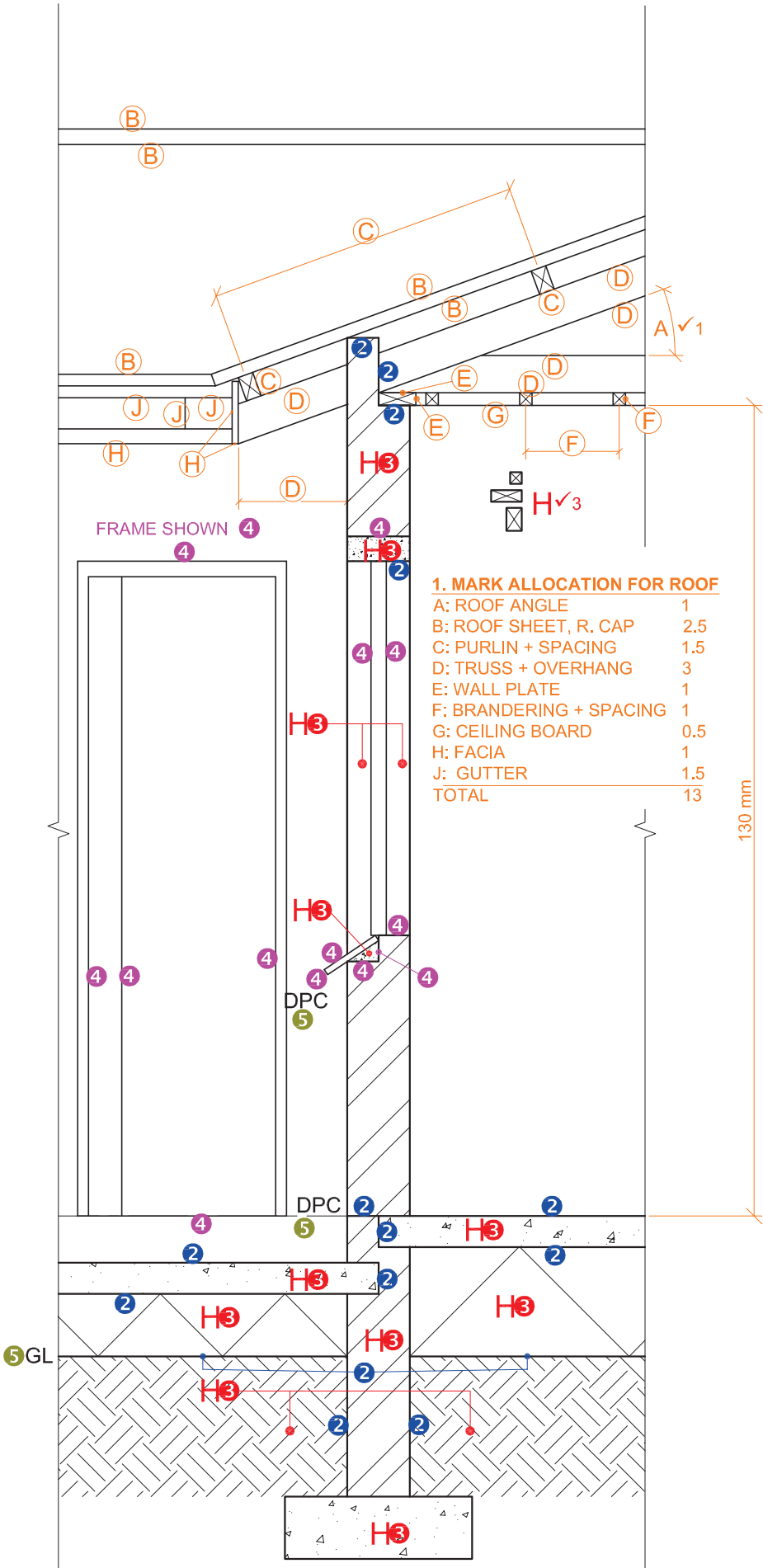
1. MARK ALLOCATION FOR ROOF

A: ROOF ANGLE		1
B: ROOF SHEET, R. CAP		2.5
C: PURLIN + SPACING		1.5
D: TRUSS + OVERHANG		3
E: WALL PLATE		1
F: BRANDERING + SPACING		1
G: CEILING BOARD		0.5
H: FACIA		1
J: GUTTER		1.5
TOTAL		13

FRAME SHOWN

DPC

DPC

GL

130 mm

SECTION A-A
SCALE 1 : 20

	ASSESSMENT CRITERIA	
	DETAILED SECTION	
1	ROOF DETAIL	13
2	SLAB + WALL	7
3	HATCHING	$6\frac{1}{2}$
4	WINDOW + DOOR	7
5	LABELS	$1\frac{1}{2}$
	SUBTOTAL	**35**

PAPER 1 QUESTION 4
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