



# basic education

Department:  
Basic Education  
**REPUBLIC OF SOUTH AFRICA**

**SENIOR CERTIFICATE/  
NATIONAL SENIOR CERTIFICATE**

**GRADE 12**

**ENGINEERING GRAPHICS AND DESIGN P1**

**NOVEMBER 2020**

**MARKING GUIDELINES**

**MARKS: 100**

**These marking guidelines consist of 8 pages.**

ANSWERS		
1	422-2019	1
2	(MR) A BOBANI	1
3	2019-09-21	1
4	2	1
5	2	1
6	10810	1
7	INSPECTION CHAMBER	1
8	1,8	1
9	RE	1
10	RED	1
11	BUILDING LINE / BL	1
12	EARTH / LIGHTNING CONDUCTOR	1
13	DRAIN FIELD	1
14	1 : 30	1
15	NORTH WEST	2
16	4	2
17	14,89	2
18	<i>See the title panel</i>	3
19		3
20		4
<b>TOTAL</b>		<b>30</b>

ANSWER 18

✓ =FORMULA

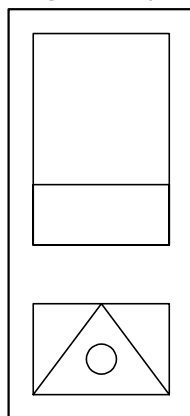
$$\begin{aligned} \text{Perimeter} &= (59,50 + 23,45 + 61,15 + 37,5) \cdot 3,5 \\ &= 178,1 \checkmark \text{m} \checkmark \end{aligned}$$

ANSWER 19

✓ =FORMULA

$$\begin{aligned} \text{Area} &= (10 \times 6) + (5,55 \times 8,14) + (2,5 \times 3,75) \\ &= 114,55 \checkmark \text{m}^2 \checkmark \end{aligned}$$

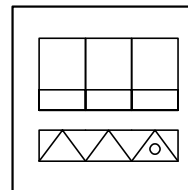
ANSWER 20



RECTANGLE 1  
LINE 0,5  
FREEHAND 0,5

RECTANGLE 1  
TRIANGLE 0,5  
HOLE 0,5

SANS 10143



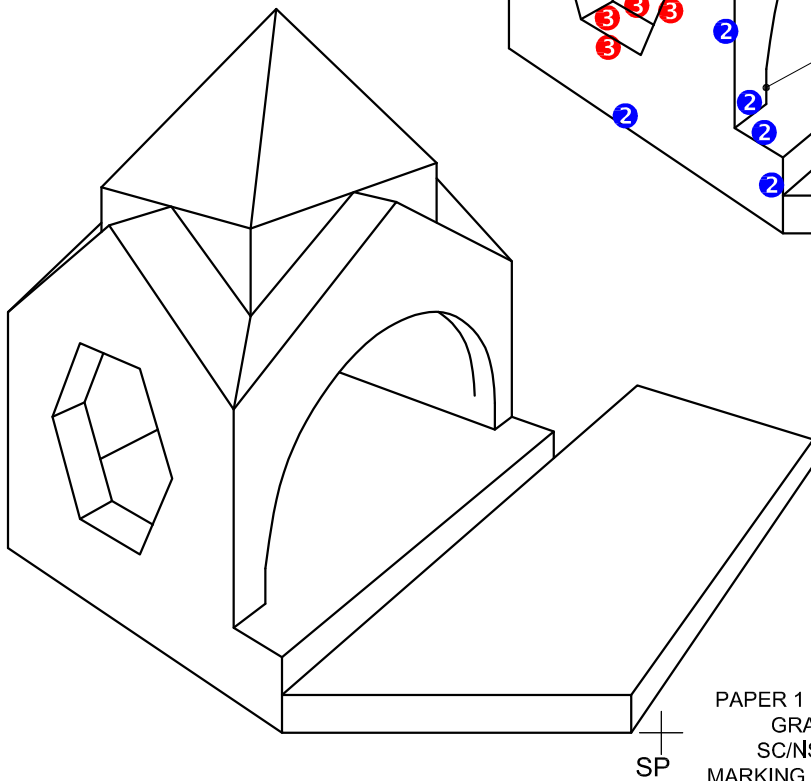
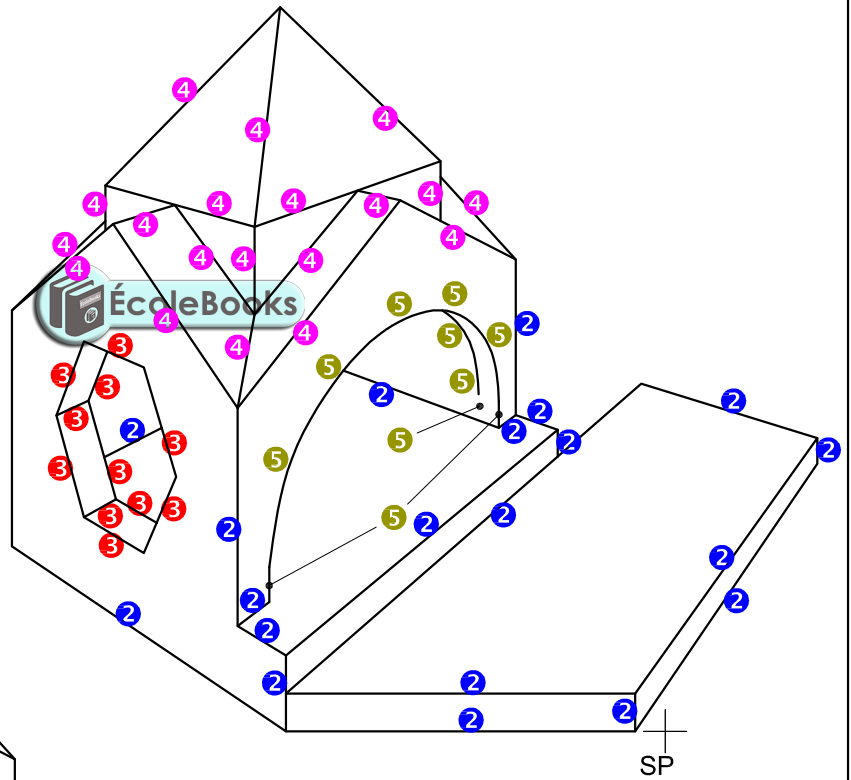
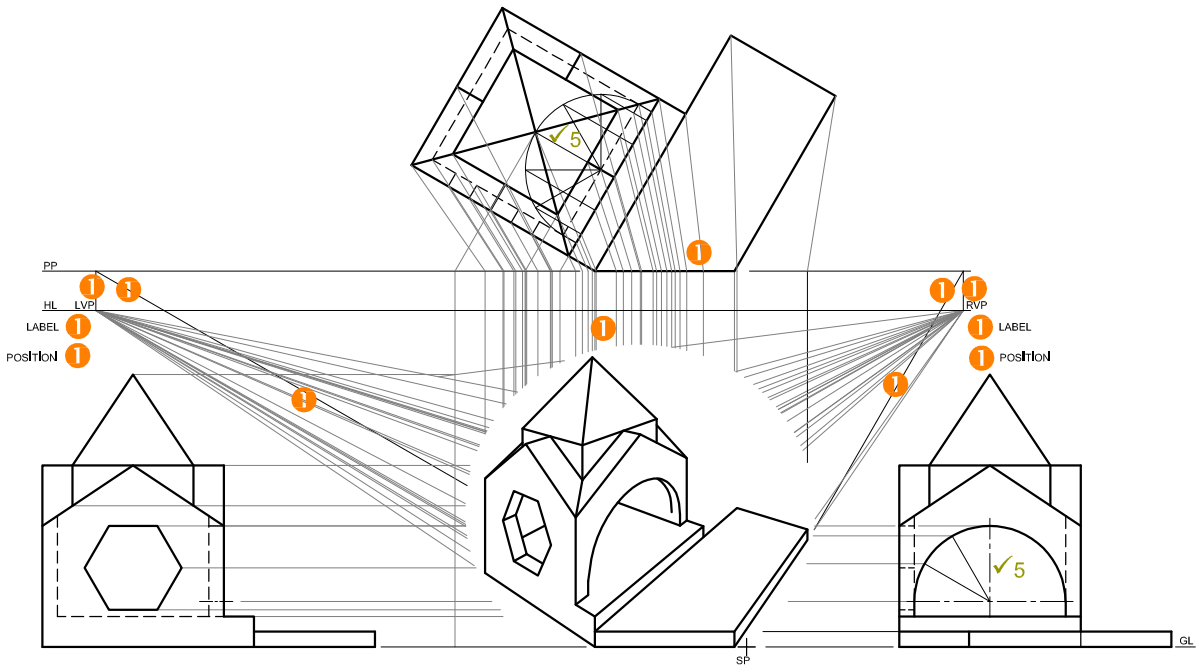
PAPER 1 QUESTION 1  
GRADE 12  
SC/NSC 2020  
MARKING GUIDELINE

2. CONSTRUCTION  
 HEXAGON 1  
 ROTATION 1  
 TOTAL 2

4. TRUE SHAPE  
 ANY RECOGNIZED METHOD 1

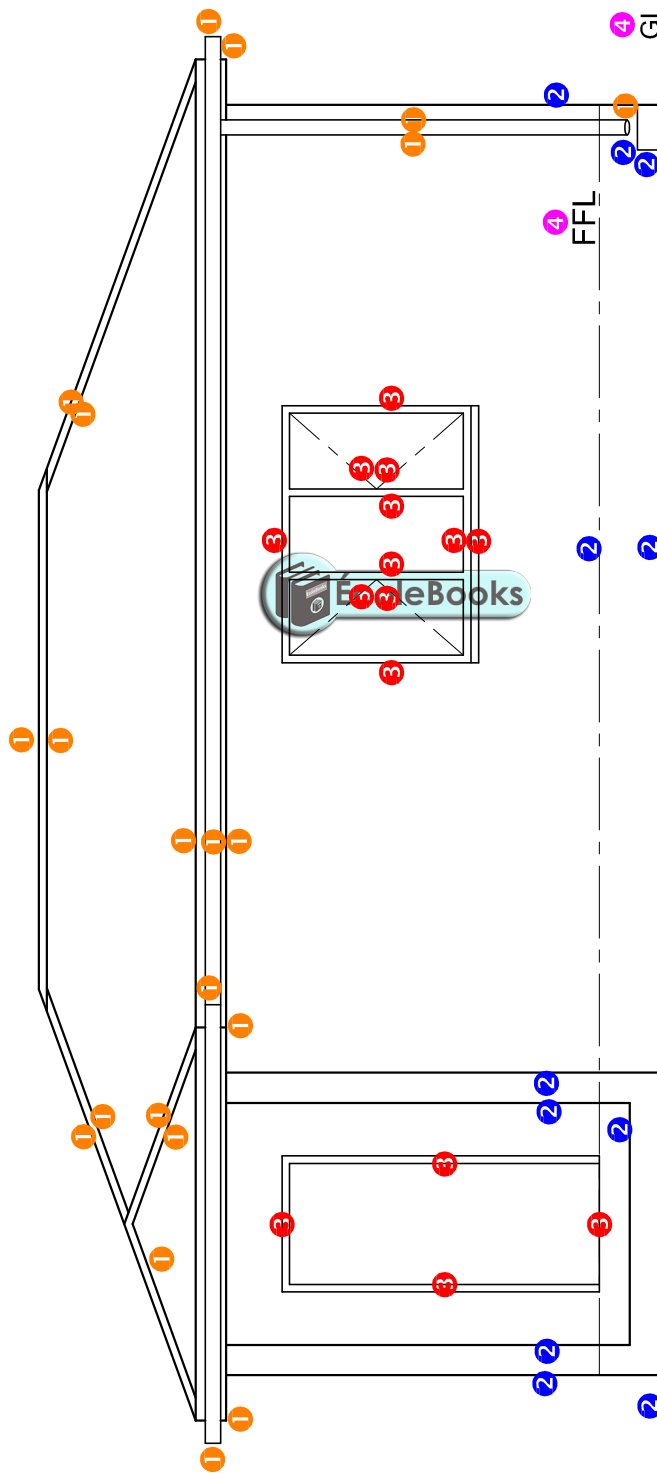
ASSESSMENT CRITERIA	
1	FRONT VIEW
2	SECTIONAL TOP VIEW + CONSTRUCTION
3	SECTIONAL RIGHT VIEW
4	TRUE SHAPE
<b>TOTAL 38</b>	

PAPER 1 QUESTION 2  
 GRADE 12  
 NOVEMBER 2019  
 MARKING GUIDELINES



PAPER 1 QUESTION 3  
 GRADE 12  
 SC/NSC 2020  
 MARKING GUIDELINES

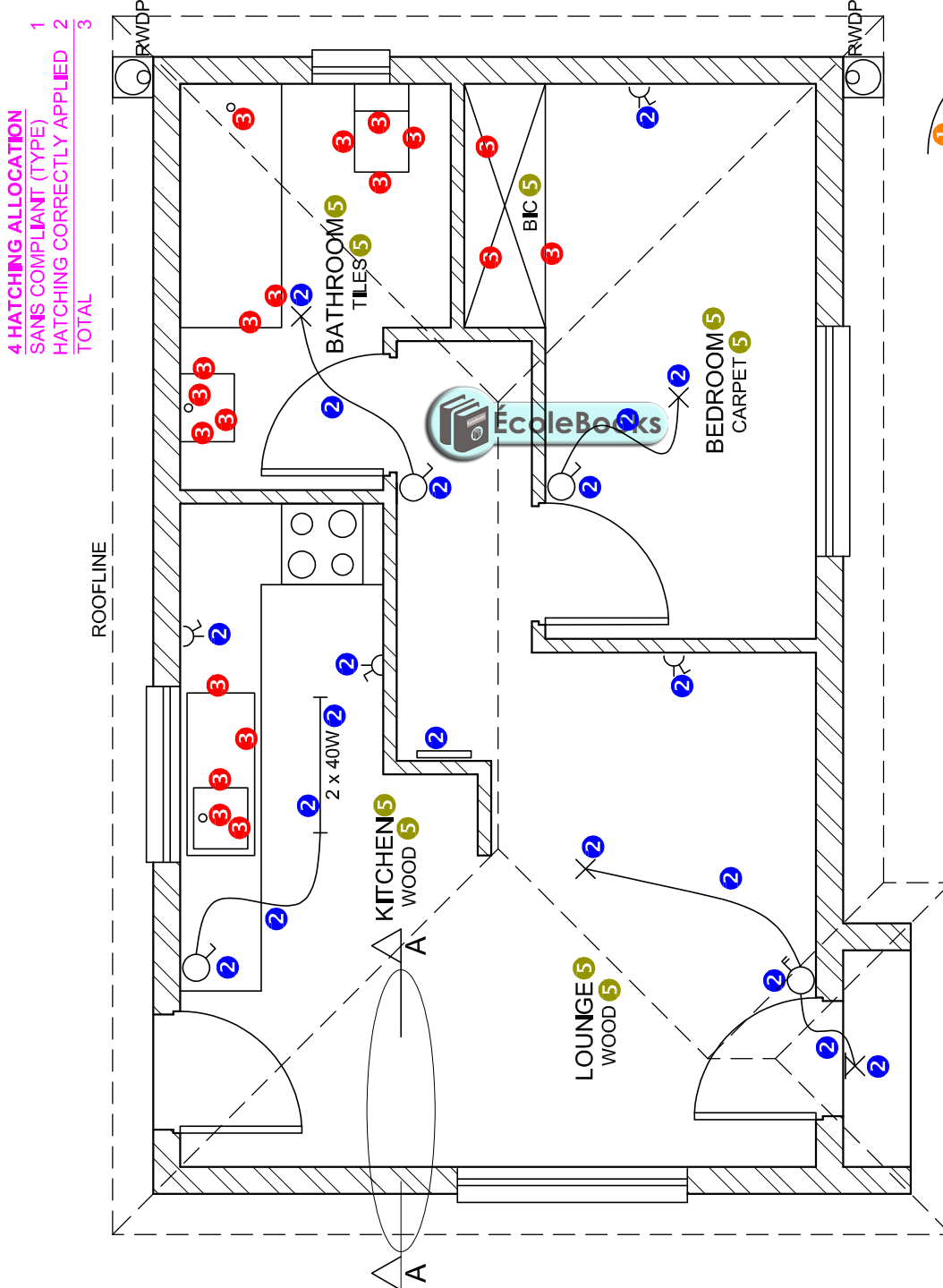
ASSESSMENT CRITERIA		
1	CONSTRUCTION	6
2	WALLS	10½
3	HEXAGONAL OPENING	5½
4	ROOF	9½
5	CURVE	6½
<b>TOTAL</b>		<b>38</b>



SOUTH ELEVATION 4

ASSESSMENT CRITERIA		SOUTH ELEVATION	
1	ROOF + RWDP	10½	
2	WALLS + FFL	5½	
3	DOOR + WINDOW	7½	
4	LABELS	1½	
<b>SUBTOTAL</b>		<b>25</b>	

PAPER 1 QUESTION 4  
 GRADE 12  
 SC/NSC 2020  
 MARKING GUIDELINES



**4 HATCHING ALLOCATION**  
 1 HATCHING ALLOCATION  
 2 HATCHING ALLOCATION  
 3 HATCHING ALLOCATION  
 TOTAL



**FLOOR PLAN**  
 SCALE 1 : 50

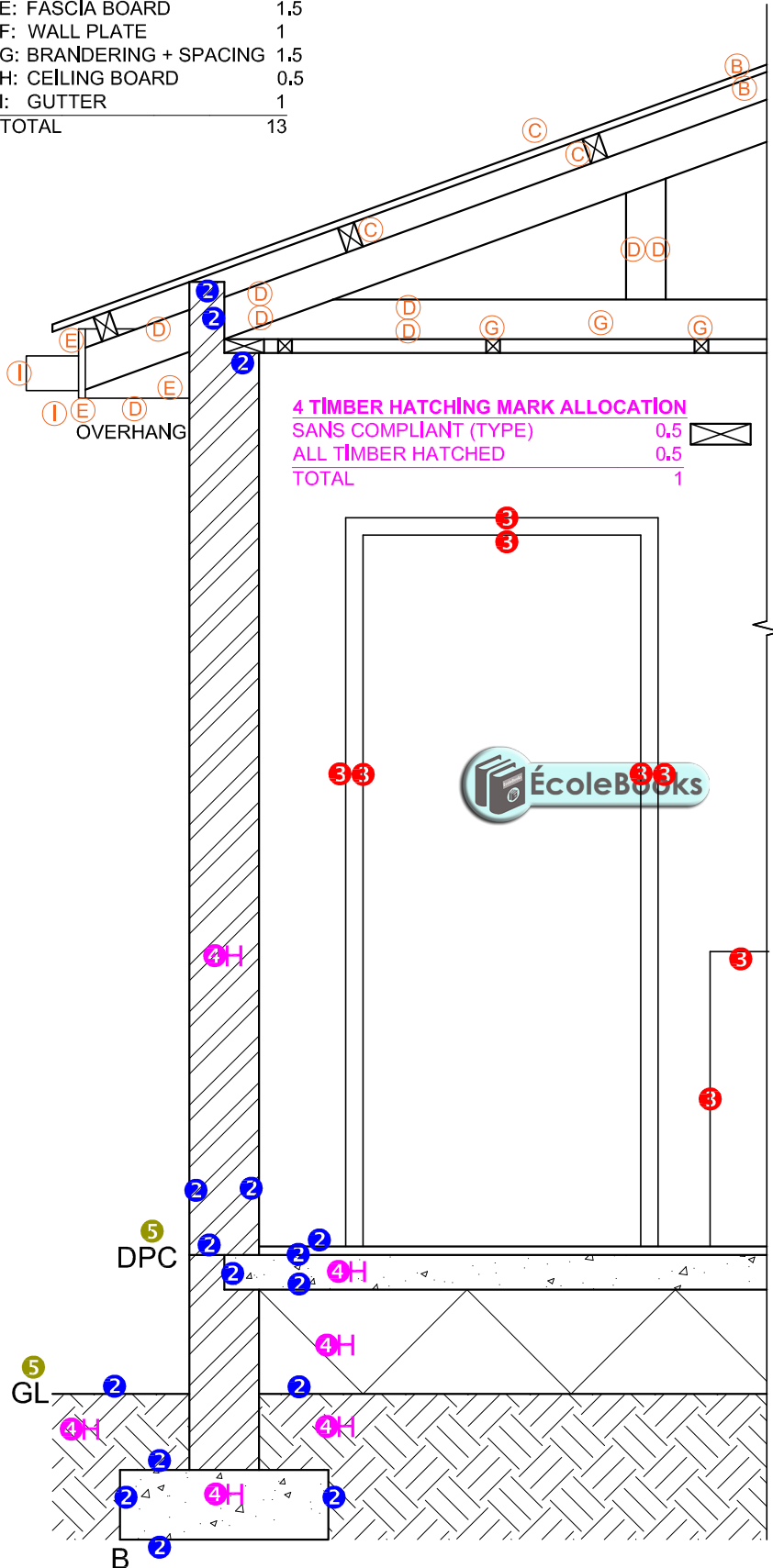


PAPER 1 QUESTION 4  
 GRADE 12  
 SC/NSC 2020  
 MARKING GUIDELINES

ASSESSMENT CRITERIA		FLOOR PLAN	
1	DOORS + WINDOWS	12	
2	ELECTRICAL	10	
3	FIXTURES	9½	
4	HATCHING	3	
5	LABELS	4½	
<b>SUBTOTAL</b>		<b>39</b>	

**MARK ALLOCATION FOR ROOF (1)**

A: ROOF ANGLE	1
B: ROOF SHEET	1
C: PURLIN + SPACING	1,5
D: TRUSS + OVERHANG	4
E: FASCIA BOARD	1,5
F: WALL PLATE	1
G: BRANDING + SPACING	1,5
H: CEILING BOARD	0,5
I: GUTTER	1
<b>TOTAL</b>	<b>13</b>



**DETAILED SECTION A-A**  
SCALE 1 : 20

PAPER 1 QUESTION 4  
GRADE 12  
SC/NSC 2020  
MARKING GUIDELINES

ASSESSMENT CRITERIA		
DETAILED SECTION		
1	ROOF DETAIL	13
2	WALL	8
3	DOOR + CUPBOARD	4
4	HATCHING	4
5	LABELS	1
<b>SUBTOTAL</b>		<b>30</b>