



# basic education

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

**NATIONAL  
SENIOR CERTIFICATE**

**GRADE 12**

**ENGINEERING GRAPHICS AND DESIGN P1**

**NOVEMBER 2017**

**MARKING GUIDELINES**

**MARKS: 200**

**This Marking guidelines consists of 7  
pages.**

<b>ANSWERS</b>		
1	LUKE	1
2	STAND 7392	1
3	8789	1
4	30 m or 30	1
5	1,2 m (unit m must be shown) or 1200 mm or 1200	1
6	2	1
7	INSPECTION EYE	1
8	8 or 9	1
9	50 m or 50	1
10	140 l <sup>3</sup> / CUBIC LITRE or 140 (2 marks) 2 x 70 (1 mark)	2
11	ORANGE RIVER or RIVER	1
12	SECURITY FENCE or FENCE	1
13	(50 YEAR) FLOOD LINE	1
14	NORTH POINT	1
15	BROWN	1
16	SOUTH EAST or SE	2
17	6,2 m or 6,2 (2 marks) 6200 or 6200 mm (1 mark)	2
18	735,23 m (calculation 1, answer 1, decimal correct 1)	3
19	1991,25 m <sup>2</sup> (calculation 1, answer 1, metre <sup>2</sup> 1)	3
20	<i>See below</i>	4

TOTAL: 30

**ANSWER 18**  
Show ALL calculations.

$$L+L+L+L$$

$$=143,560+223,910+143,890+223,870$$

$$= 735,23 \text{ m}$$

**ANSWER 19**  
Show ALL calculations.

$$(L \times B) + (L \times B) + (L \times B)$$

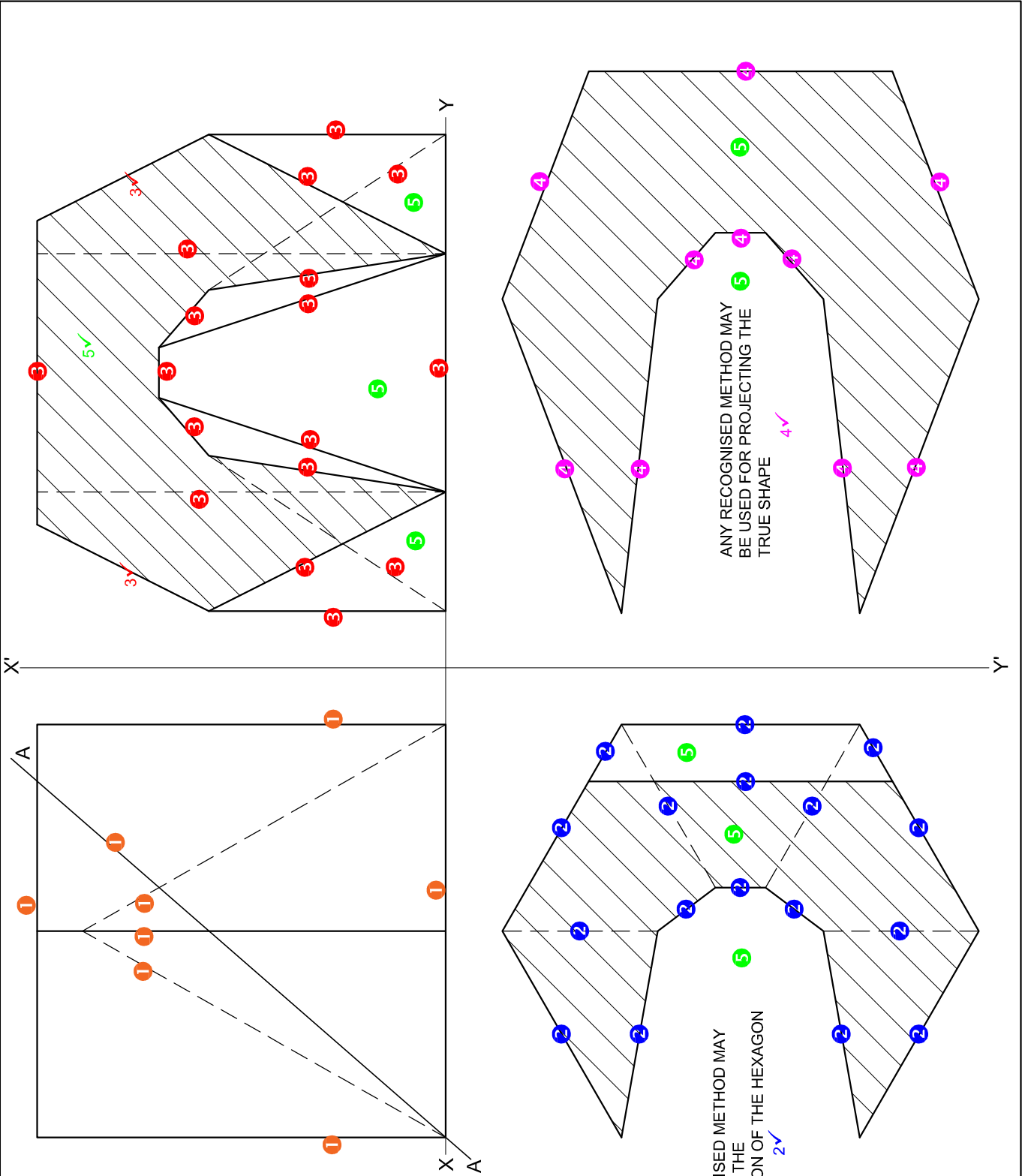
$$= (19,5 \times 28,5) + (21 \times 24) + (27 \times 34,5)$$

$$= 1991,25 \text{ m}^2$$

20

**FREEHAND 1**

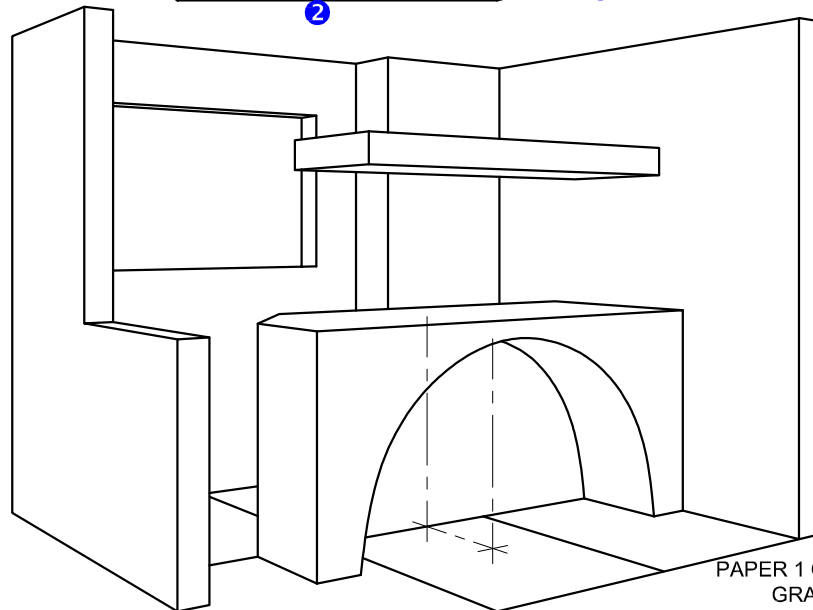
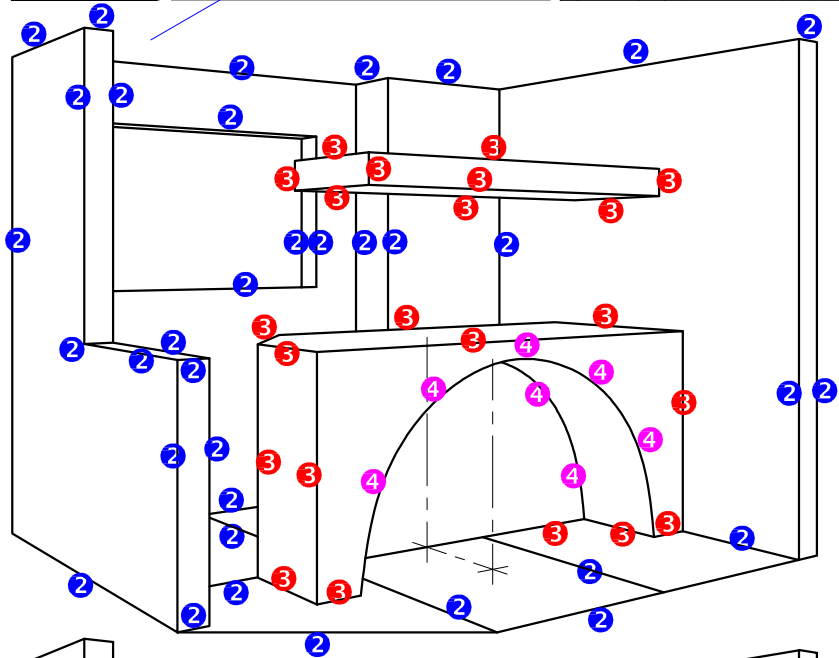
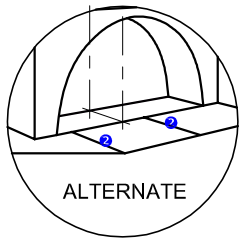
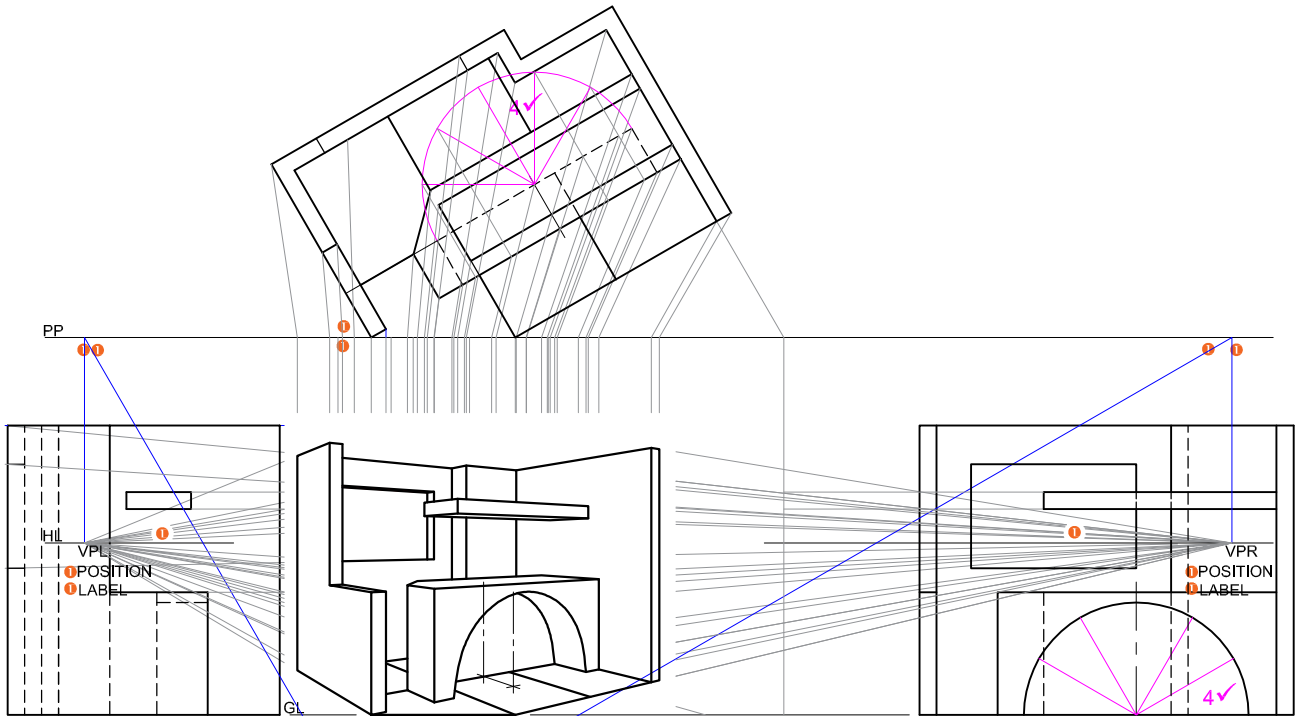
PAPER 1 QUESTION 1  
GRADE 12  
NOVEMBER 2017  
MARKING GUIDELINES



ASSESSMENT CRITERIA	
1	FRONT VIEW
2	SECTIONAL TOP VIEW
3	SECTIONAL LEFT VIEW
4	TRUE SHAPE
5	HATCHING
<b>TOTAL</b>	
	<b>35</b>

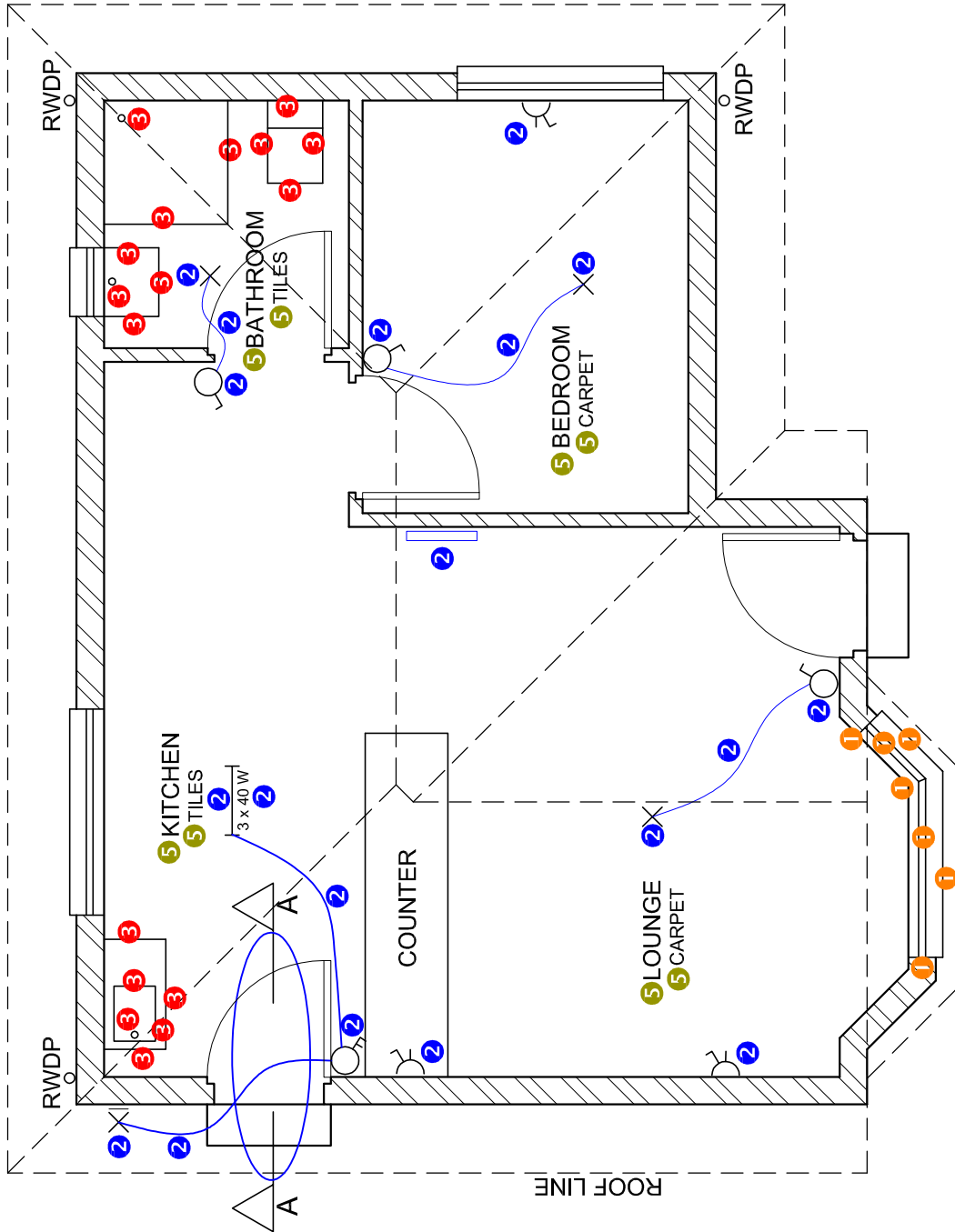
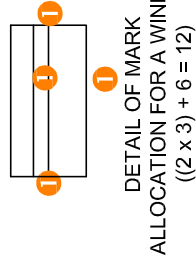
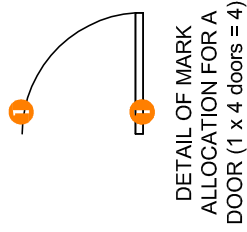
ANY RECOGNISED METHOD MAY BE USED FOR THE CONSTRUCTION OF THE HEXAGON  
2✓

ANY RECOGNISED METHOD MAY BE USED FOR PROJECTING THE TRUE SHAPE  
4✓



ASSESSMENT CRITERIA		
1	CONSTRUCTION	6
2	WALLS AND WINDOW	17½
3	COUNTER	11
4	SEMICIRCLE	5½
<b>TOTAL</b>		<b>40</b>

PAPER 1 QUESTION 3  
 GRADE 12  
 NOVEMBER 2017  
 MARKING GUIDELINES



FLOOR PLAN		POSSIBLE
1	DOORS + WINDOWS	13½
2	ELECTRICAL	9½
3	FIXTURES	8½
4	HATCHING	3
5	LABELS	4
<b>SUBTOTAL</b>		<b>38½</b>

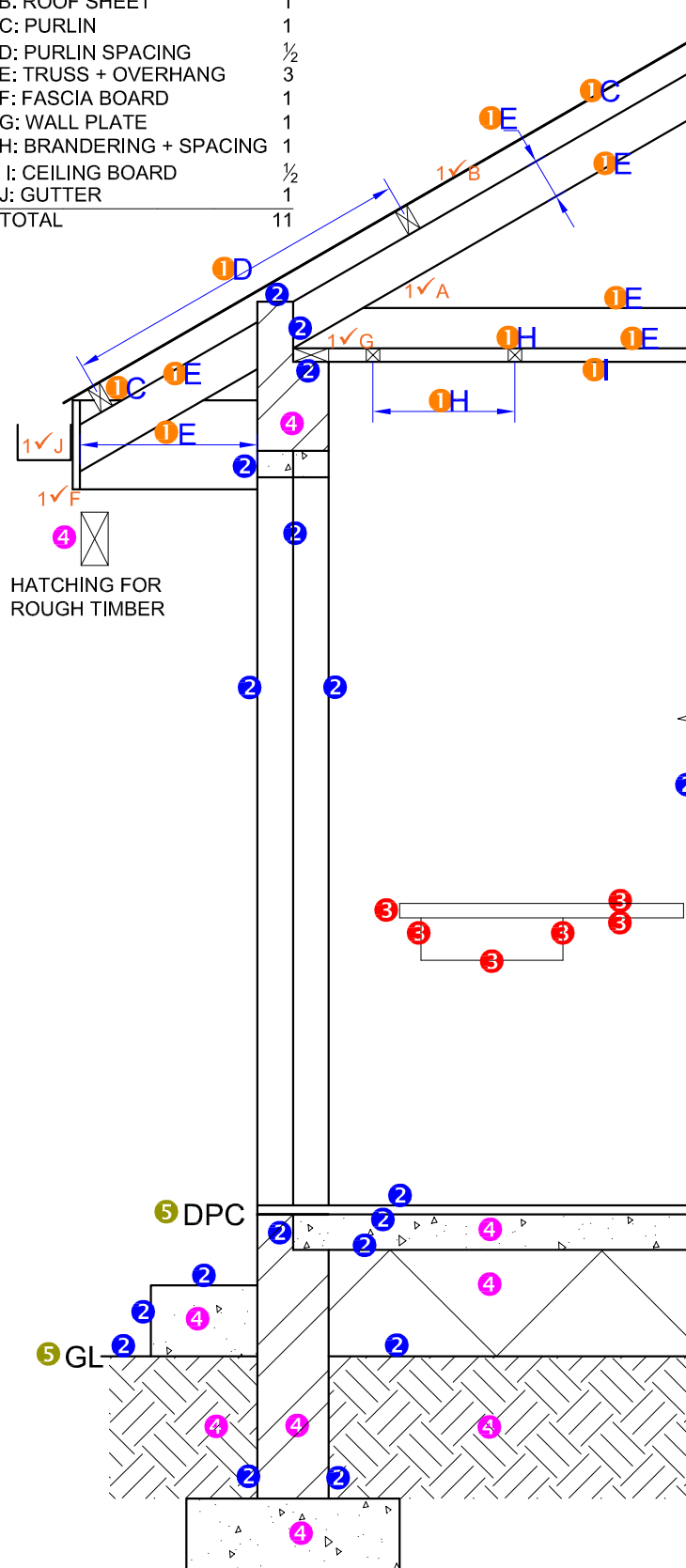
FLOOR PLAN  
SCALE 1 : 50

**4 HATCHING ALLOCATION**

SANS COMPLIANT (TYPE)	1
HATCHING CORRECTLY APPLIED	2
<b>TOTAL</b>	<b>3</b>

**MARK ALLOCATION FOR ROOF (1)**

A: ROOF ANGLE	1
B: ROOF SHEET	1
C: PURLIN	1
D: PURLIN SPACING	1/2
E: TRUSS + OVERHANG	3
F: FASCIA BOARD	1
G: WALL PLATE	1
H: BRANDING + SPACING	1
I: CEILING BOARD	1/2
J: GUTTER	1
<b>TOTAL</b>	<b>11</b>

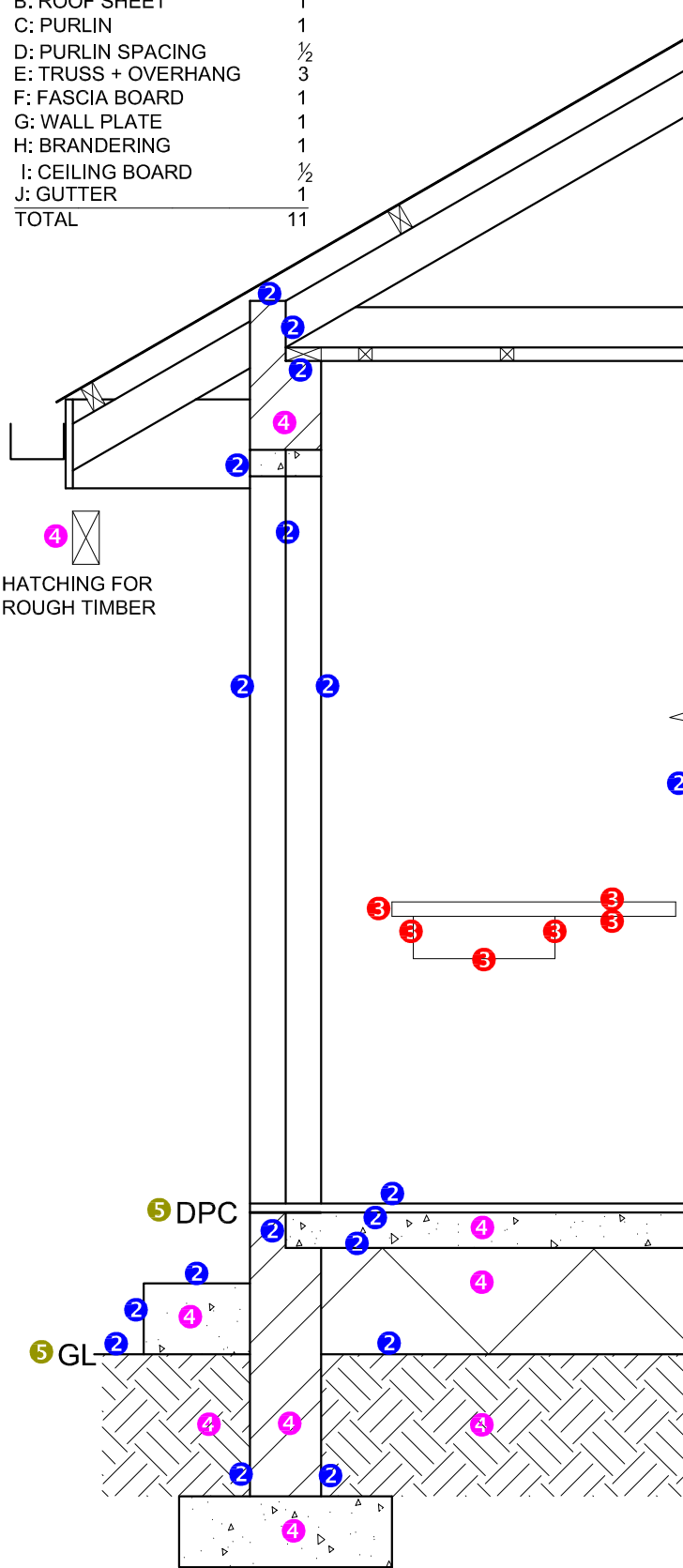


DETAILED SECTION		
1	ROOF DETAIL	11
2	FOUNDATION + WALL + DOOR	9
3	SINK	3
4	HATCHING	4 1/2
5	LABELS	1
<b>SUBTOTAL</b>		<b>28 1/2</b>

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

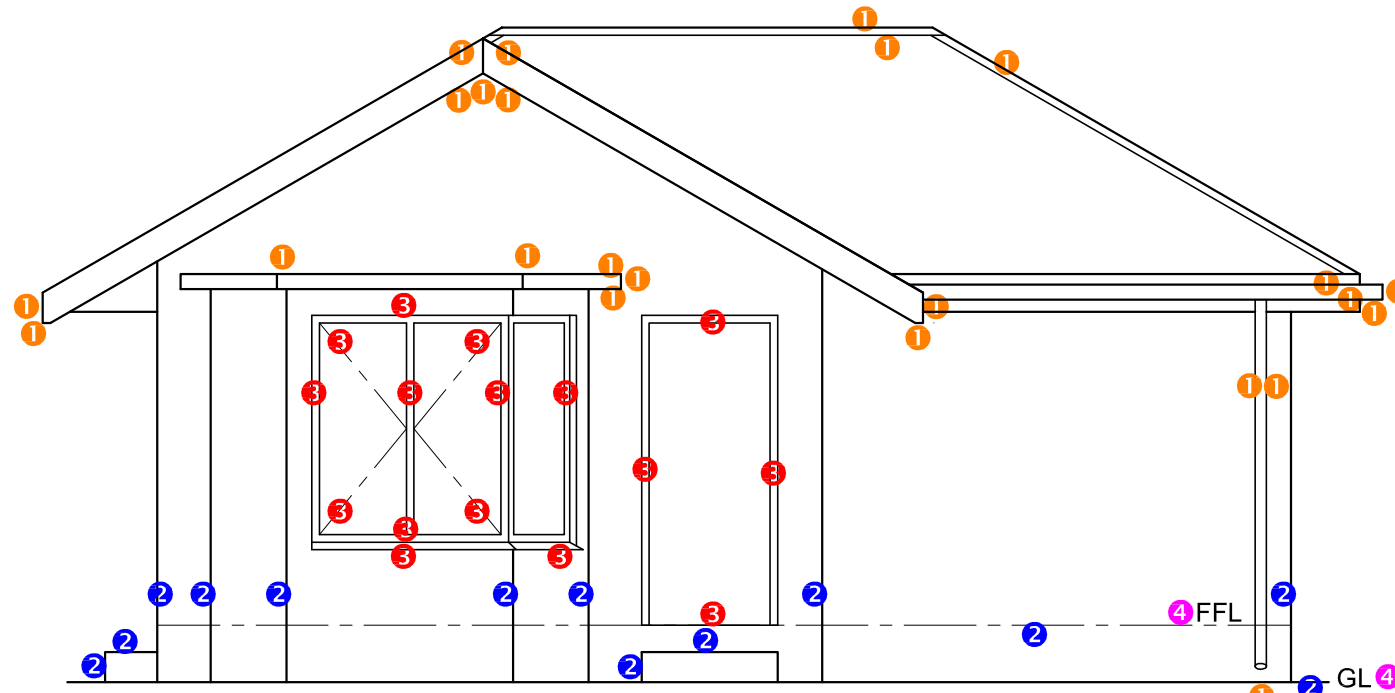
**MARK ALLOCATION FOR ROOF (1)**

A: ROOF ANGLE	1
B: ROOF SHEET	1
C: PURLIN	1
D: PURLIN SPACING	1/2
E: TRUSS + OVERHANG	3
F: FASCIA BOARD	1
G: WALL PLATE	1
H: BRANDING	1
I: CEILING BOARD	1/2
J: GUTTER	1
<b>TOTAL</b>	<b>11</b>

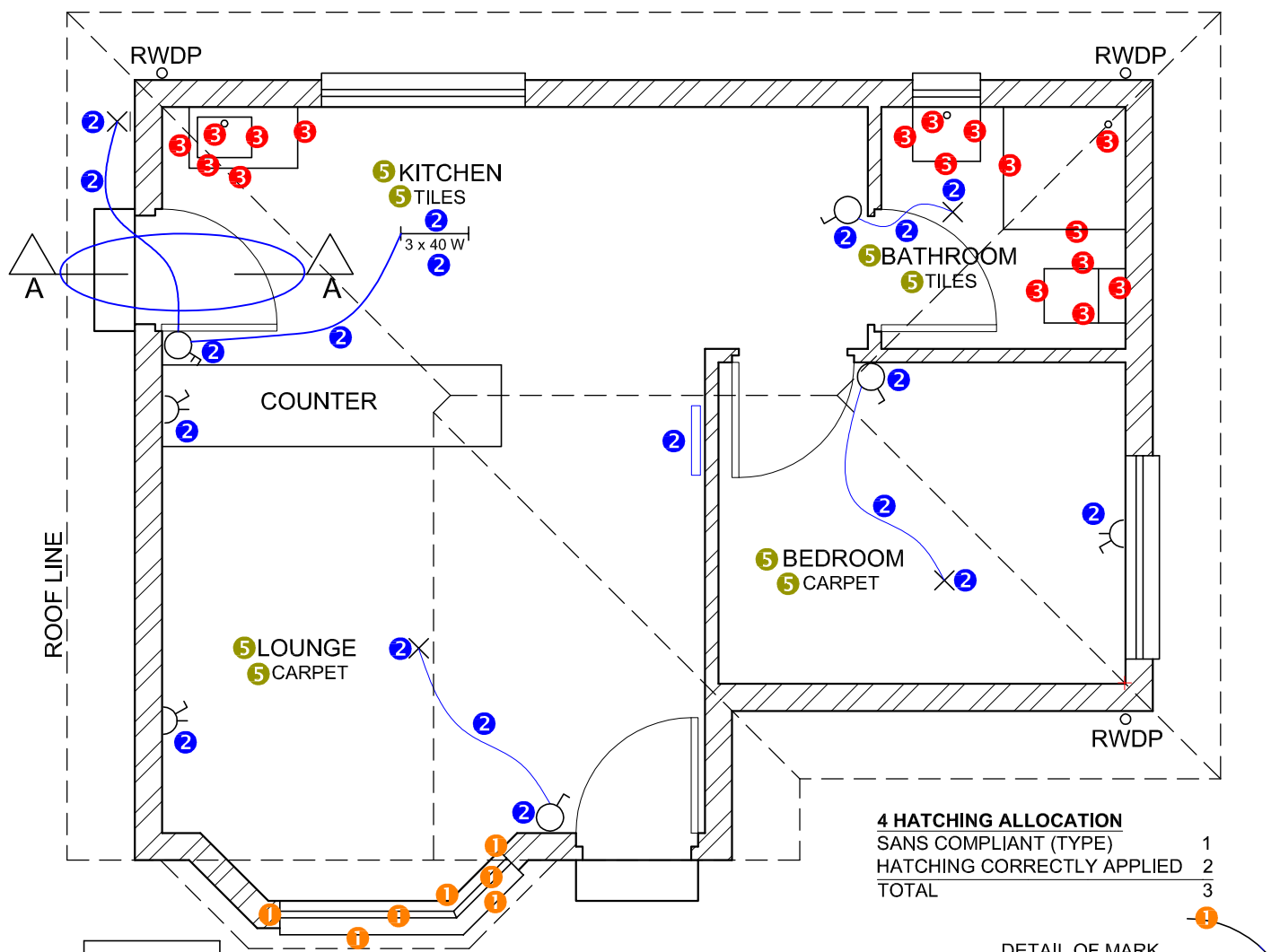


**DETAILED SECTION A-A**  
SCALE 1 : 20

DETAIL OF MARK ALLOCATION FOR A WINDOW  
(2 x 3) + 6 = 12



**WEST ELEVATION**



**FLOOR PLAN**  
SCALE 1 : 50

**4 HATCHING ALLOCATION**

SANS COMPLIANT (TYPE)	1
HATCHING CORRECTLY APPLIED	2
<b>TOTAL</b>	<b>3</b>

DETAIL OF MARK ALLOCATION FOR A DOOR (1 x 4 doors = 4)

**FOR OFFICIAL USE ONLY**

INCORRECT SCALE		
NON-ALIGNMENT OF VIEWS		
VIEW(S) ROTATED		
SECTION VIEWED INCORRECTLY		
INCORRECT LETTERING		
<b>TOTAL</b>		

**MARK ALLOCATION FOR ROOF SECTION**

A	B	C	D	E	F	G	H	I	J

**ASSESSMENT CRITERIA**

**FLOOR PLAN**

	POSSIBLE	OBTAINED	SIGN	MODERATED
1 DOORS + WINDOWS	13 1/2			
2 ELECTRICAL	9 1/2			
3 FIXTURES	8 1/2			
4 HATCHING	3			
5 LABELS	4			
<b>SUBTOTAL</b>	<b>38 1/2</b>			

**WEST ELEVATION**

	POSSIBLE	OBTAINED	SIGN	MODERATED
1 ROOF + RWDP	12			
2 WALLS + FFL	6 1/2			
3 DOOR + WINDOW	8			
4 LABELS	1 1/2			
<b>SUBTOTAL</b>	<b>28</b>			

**DETAILED SECTION**

	POSSIBLE	OBTAINED	SIGN	MODERATED
1 ROOF DETAIL	11			
2 FOUNDATION + WALL + DOOR	9			
3 SINK	3			
4 HATCHING	4 1/2			
5 LABELS	1			
<b>SUBTOTAL</b>	<b>28 1/2</b>			

**TOTAL 95**

PENALTIES (-)

**GRAND TOTAL**