



**INSTRUCTIONS AND INFORMATION**

1. Answer all the questions.
2. ALL drawings are in first-angle orthographic projection, unless stated otherwise.
3. ALL drawings must be drawn to scale 1:1, unless stated otherwise.
4. ALL questions must be answered on the DIAGRAM SHEET as instructed.
5. ALL the pages must be restapled in numeric sequence, irrespective of whether the question was attempted or not.
6. Time management is essential in order to complete all the questions.
7. Print your name and surname as well as the grade in the space provided on each page.
8. ALL answers must be drawn accurately and neatly.
9. ALL necessary construction and projection lines must be shown.
10. Plan each drawing carefully from the given position, which is indicated on the diagram sheets.
11. Any details or dimensions not given must be assumed in good proportion.

**ENGINEERING GRAPHICS AND DESIGN**

**GRADE 10**

**PAPER 1**

**NOVEMBER 2018**

**TIME: 2 HOURS**

**TOTAL: 100**

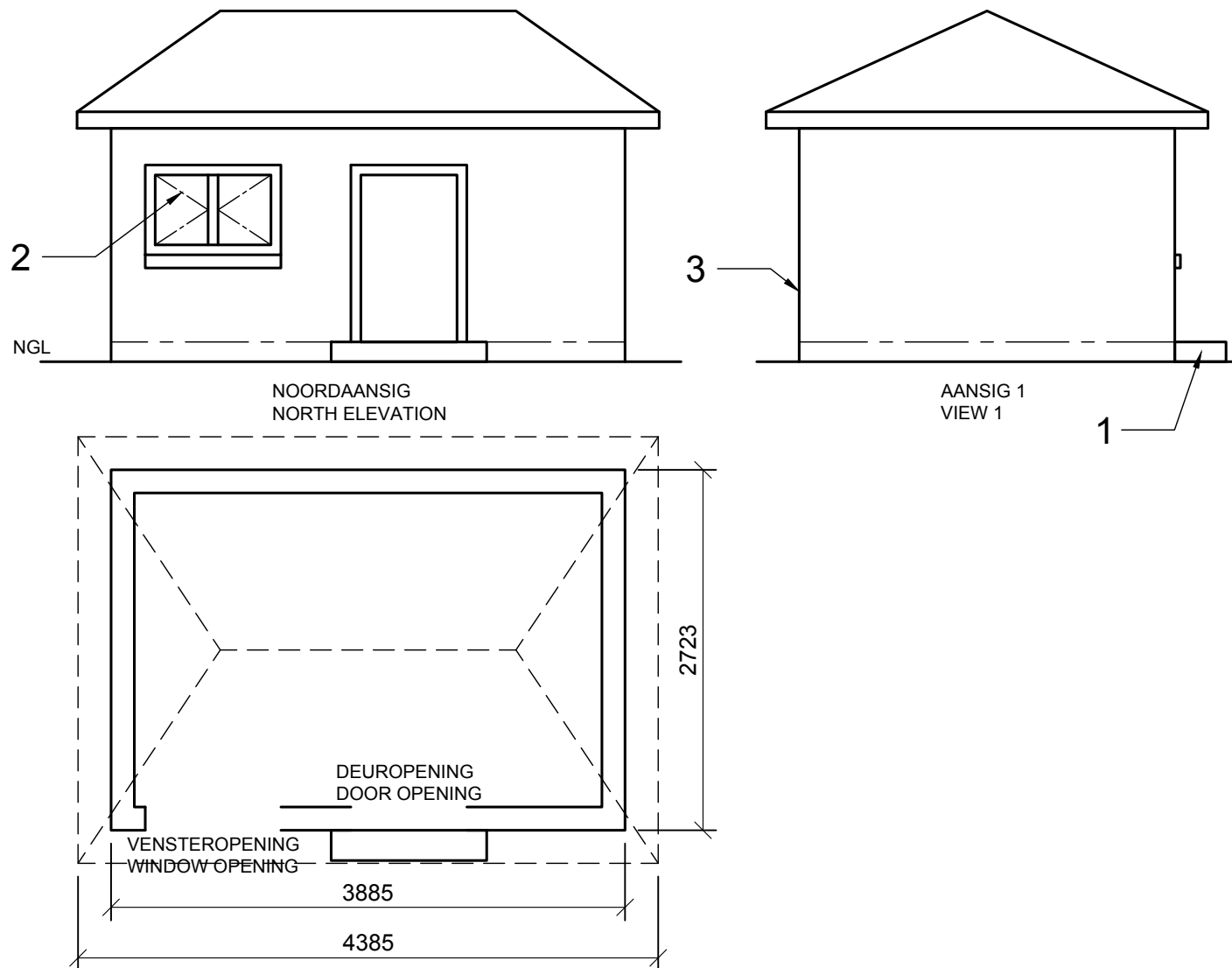
This question paper consists of 6 pages

FOR OFFICIAL USE ONLY								
QUESTION	MARKS OBTAINED			½	MODERATED			½
1								
2								
3								
4								
TOTAL								
	1	0	0		2	0	0	

FINAL CONVERTED MARK	CHECKED BY
100	

NAME & SURNAME	<b>MEMORANDUM</b>	GRADE	<b>10</b>	<b>1</b>
----------------	-------------------	-------	-----------	----------

STAPEL



**QUESTION 1: ANALYTICAL (CIVIL)**

**Given:**

The working drawings of a house in first-angle orthographic projection, a title block and a table of questions.

**Instructions:**

With a pencil, complete the table by neatly printing the correct answers in the corresponding answer column. All the questions refer to the accompanying drawings and the title block on diagram sheet 1. **[19]**

QUESTION		ANSWER		
1	Name view 1 shown on diagram sheet 1.	EAST ELEVATION	1	
2	Who drawn the drawing?	WILLEM	1	
3	What is the project number?	DC-12/2019	1	
4	What is the width of the roof in the North View?	4.385m	1	
5	In the correct area on the North Elevation, supply the drawing with a NGL annotation.		1	
6	What does the abbreviation FFL stand for?	FINISHED FLOOR LEVEL	1	
7	How many window sills are visible on the drawing?	1	1	
8	How far does the roof lean over from the edges of the house?	250mm	1	
9	Who is the clients of this project?	MR AND MS GRAAF	1	
10	Name the feature at 1?	STEP	1	
11	What is the purpose of the center line at 2?	WINDOW OPENING	1	
12	Name the feature at 3.	WALL	2	
13	What material is required to manufacture the roof?	GALVANIZED ROOF	1	
14	In the given space (see answer 14) draw free hand and according to the SANS 10143 specifications, the appropriate North arrow according to the orientation of the given views.		4	
15	In the given space (see answer 15) determine the surface area of the existing dwelling proposed drawing shown in the answer block.		4	
		TOTAL	22	

DWJA ARCHITECTS 25 ERSKINE STREET CAPE TOWN 3452 TEL: 087 567 9798			
PRINTED BY: CCC PRINTERS	PRINT DATE: 10-10-2018		
DRAWING TITLE: SITE PLAN			
PROJECT: PROPOSED NEW DWELLING FOR MR AND MRS GRAAF FOR YARD 492, 1 PRESIDENT STREET, WILLOWS, CAPE TOWN			
PROJECT NUMBER: DC-12/2019	DRAWING NUMBER: AC 33/13/355		
DATE: 2018-08-27	DRAWN: WILLEM	CHECKED: CORNE	SCALE: 1 : 100
REFERENCE CODE: P1Q1-AUG 2018			

ANSWER 14

FREEHAND 14

NOTE:  
Roof coverage: Galvanized roof  
Contractors must insure that all measurements and heights on the site is correct before working. Architects must be notified immediately if there are any changes.

ARCHITECTS SIGNATURE .....

CLIENT SIGNATURE .....

ANSWER 15  
Show ALL calculations.

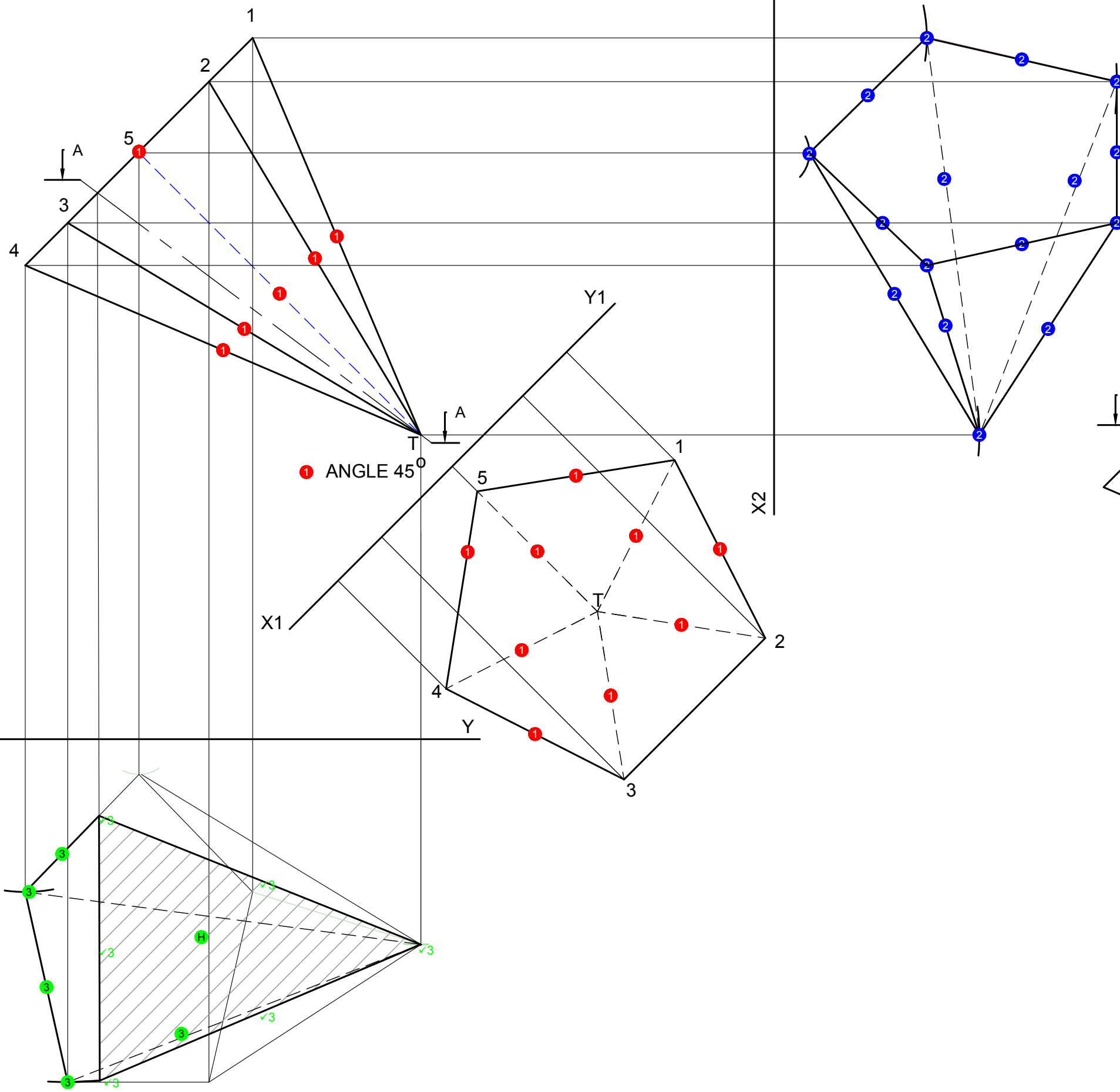
$$(L \times B) + (L \times B) + (L \times B) \checkmark 15$$

$$= (4,688 \times 2,344) + (1,875 \times 1,875) + (1,875 \times 1,875) \checkmark 15$$

$$= 10,988 + 3,515 + 3,515$$

$$= 18,02 \text{ m}^2 \checkmark 15 \checkmark 15$$

STAPEL



**QUESTION 2: SOLIDS**

**Given:**

The front view and the auxiliary view of a right regular pentagonal pyramid in F.A.O.P.  
The pentagon side 2-3 and point T

**Instructions:**

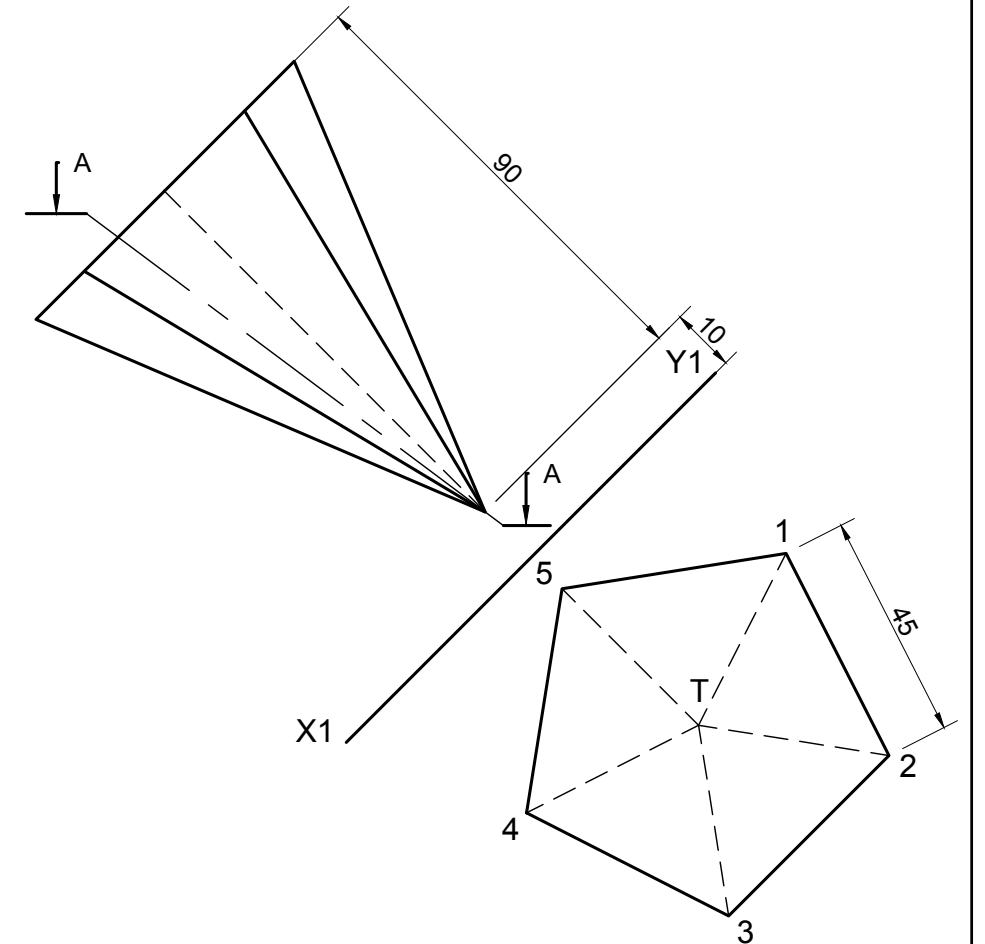
Copy the front view and auxiliary view to scale 1:1 and project the following views:

1. A sectional top view on cutting plane A - A
2. A left view.

**Note:**

Show the hidden detail on all the views

(25)



ASSESSMENT CRITERIA			
1	FRONT VIEW AND AUXILIARY VIEW	8	
2	LEFT VIEW	8	
3	SECTIONAL TOP VIEW	9	
TOTAAL		25	



**QUESTION 3: PERSPECTIVE**

**Given:**  
Two views of a house and information needed to draw a one-point perspective drawing

- PP - Picture plane
- HL - Horizon line
- GL - Ground Line
- SP - Station point
- W - Window
- D - Door

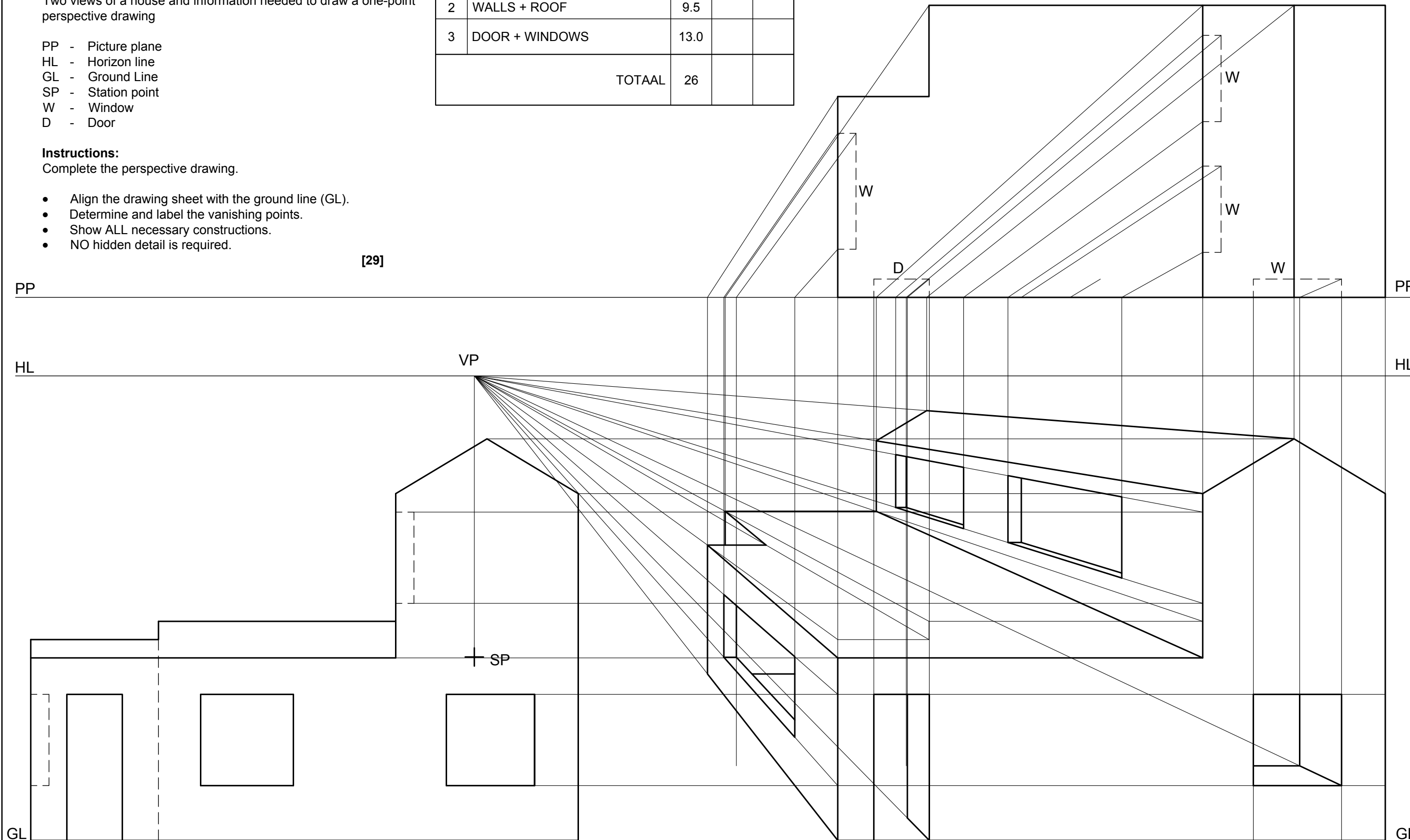
**Instructions:**

Complete the perspective drawing.

- Align the drawing sheet with the ground line (GL).
- Determine and label the vanishing points.
- Show ALL necessary constructions.
- NO hidden detail is required.

[29]

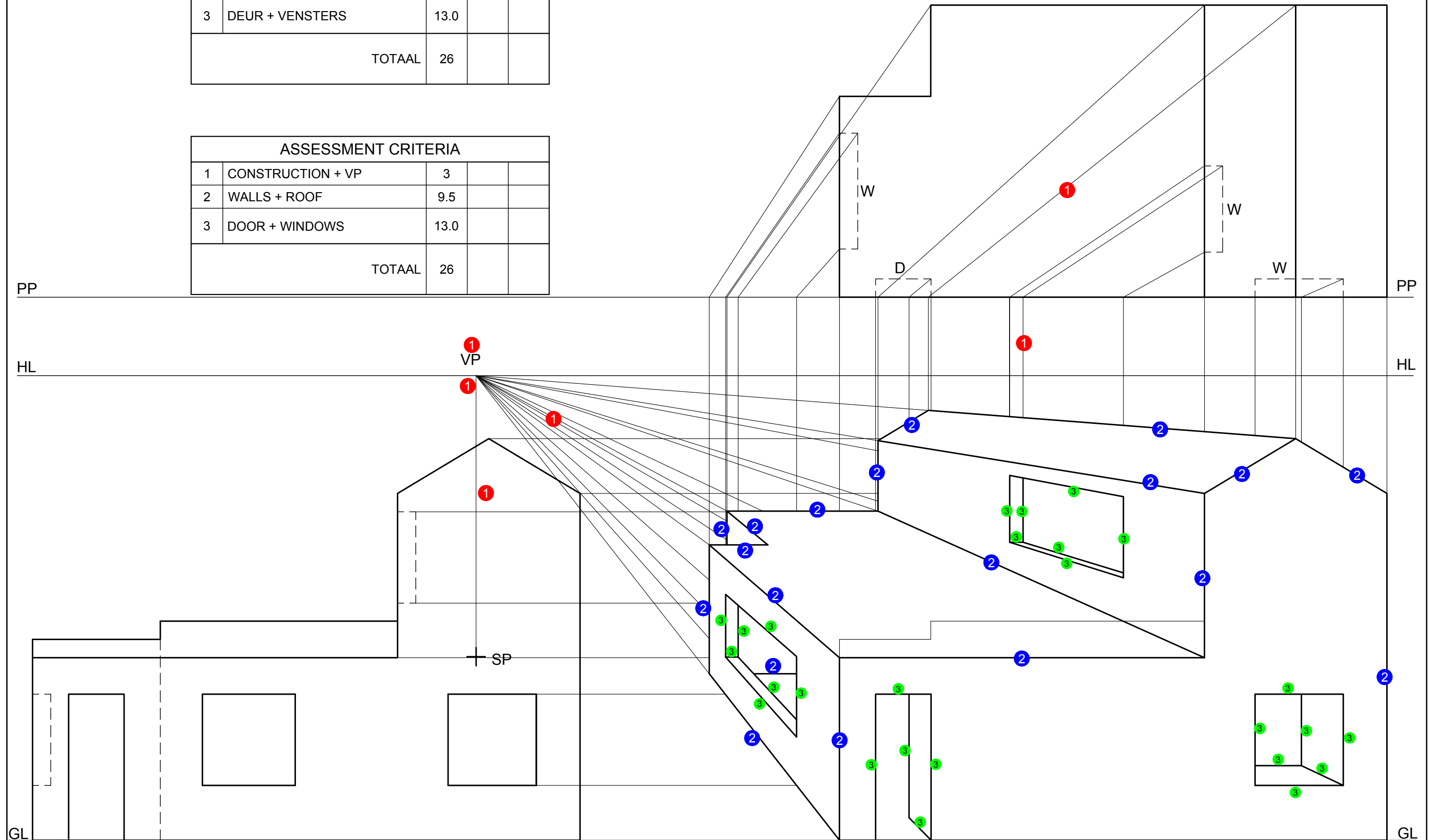
ASSESSMENT CRITERIA				
1	CONSTRUCTION + VP	3		
2	WALLS + ROOF	9.5		
3	DOOR + WINDOWS	13.0		
TOTAAL		26		



STAPEL

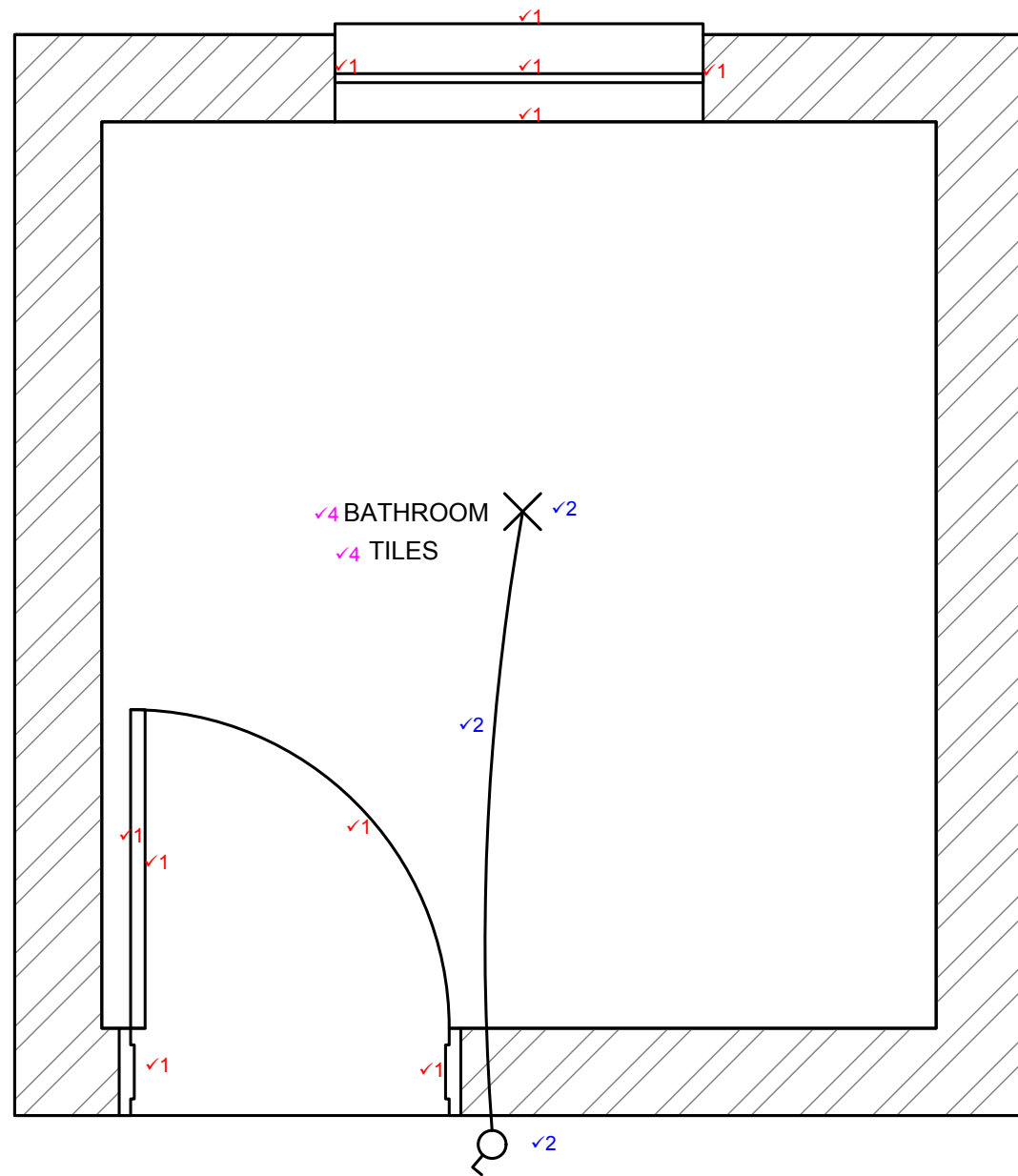
ASSESSERINGSKRITERIA				
1	KONSTRUKSIE + VP	3		
2	MURE + DAK	9.5		
3	DEUR + VENSTERS	13.0		
TOTAAL		26		

ASSESSMENT CRITERIA				
1	CONSTRUCTION + VP	3		
2	WALLS + ROOF	9.5		
3	DOOR + WINDOWS	13.0		
TOTAAL		26		

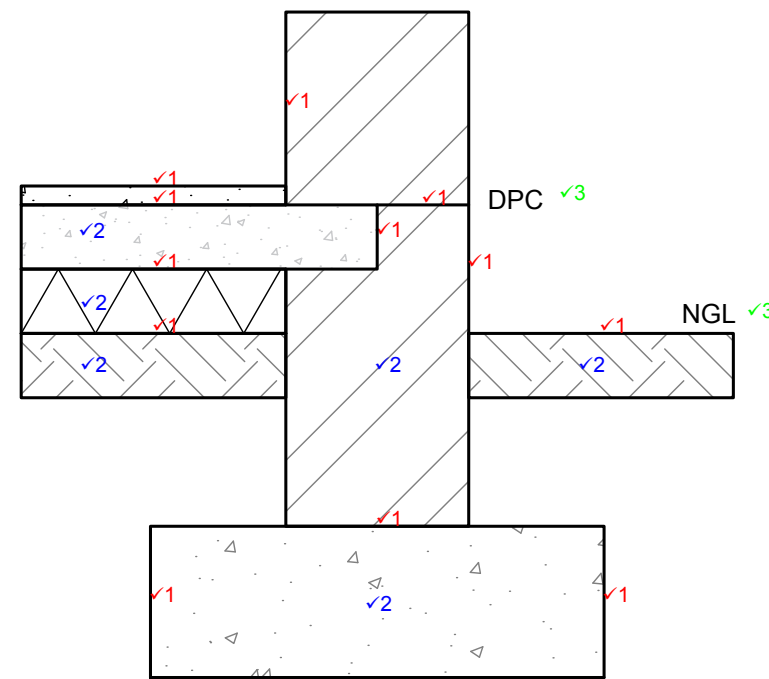




USING THE CORRECT HATCHING  
 HATCHING ARE PARALLEL  
 ALL THE WALLS ARE HATCH ✓3  
 ✓3  
 ✓3



FLOOR PLAN  
 SCALE 1:20



SECTION A-A  
 SCALE 1:10

ASSESSMENT CRITERIA				
FLOOR PLAN				
1	DOOR AND WINDOW	(10/2)	5	
2	ELECTRICITY		3	
3	HATCHING		3	
5	LABEL		3	
SUBTOTAL 1			14	
SECTIONAL VIEW				
1	SOLID LINES		12	
2	HATCHING	(8/2)	3	
3	LABEL	(2/2)	1	
SUBTOTAL 2			16	
GRAND TOTAL			30	