



**education**

**Department:**  
**Education**  
**Kwazulu - Natal**

**GRADE 12**

**ENGINEERING GRAPHICS AND DESIGN  
P1  
TRIAL EXAMINATION - 2011**

**EXAMINERS:** R. MOHUNLAL - SOUTHLANDS  
S.V. MOODLEY - SCOTTBURGH  
**MODERATORS:** V. GOUNDEN - WINGEN HEIGHTS  
P. MOODLEY - PHOENIX TECH.

**INSTRUCTIONS AND INFORMATION**

1. The question paper consists of FOUR questions.
2. Answer ALL the questions.
3. All drawings are in first-angle orthographic projection unless otherwise stated.
4. All drawings must be drawn to scale 1:1, unless otherwise stated.
5. The questions must be answered on the ANSWER SHEETS provided.
6. All the answer sheets must be re-stapled in numerical sequence and handed in irrespective of whether the question was attempted or not.
7. Careful time management is essential in order to complete all the questions.
8. Print your NAME & GRADE in the block provided on every answer sheet.
9. All answers must be drawn accurately and neatly.
10. Any details or dimensions not given must be assumed in good proportion.

**MEMO**

| FINAL CONVERTED MARK | CHECKED BY |
|----------------------|------------|
| 100                  |            |

MARKS : 100  
TIME : 3 HOURS  
This question paper consists of 6 pages.

NAME : \_\_\_\_\_ GRADE: 12

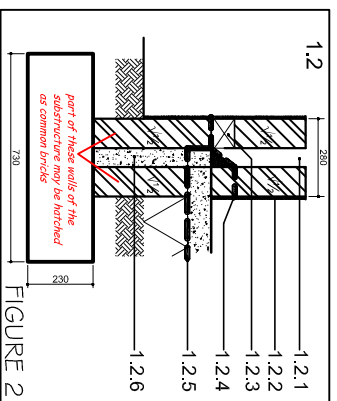
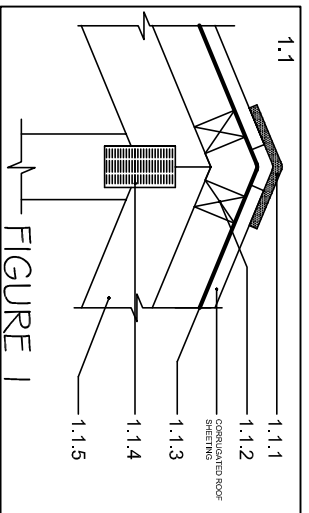
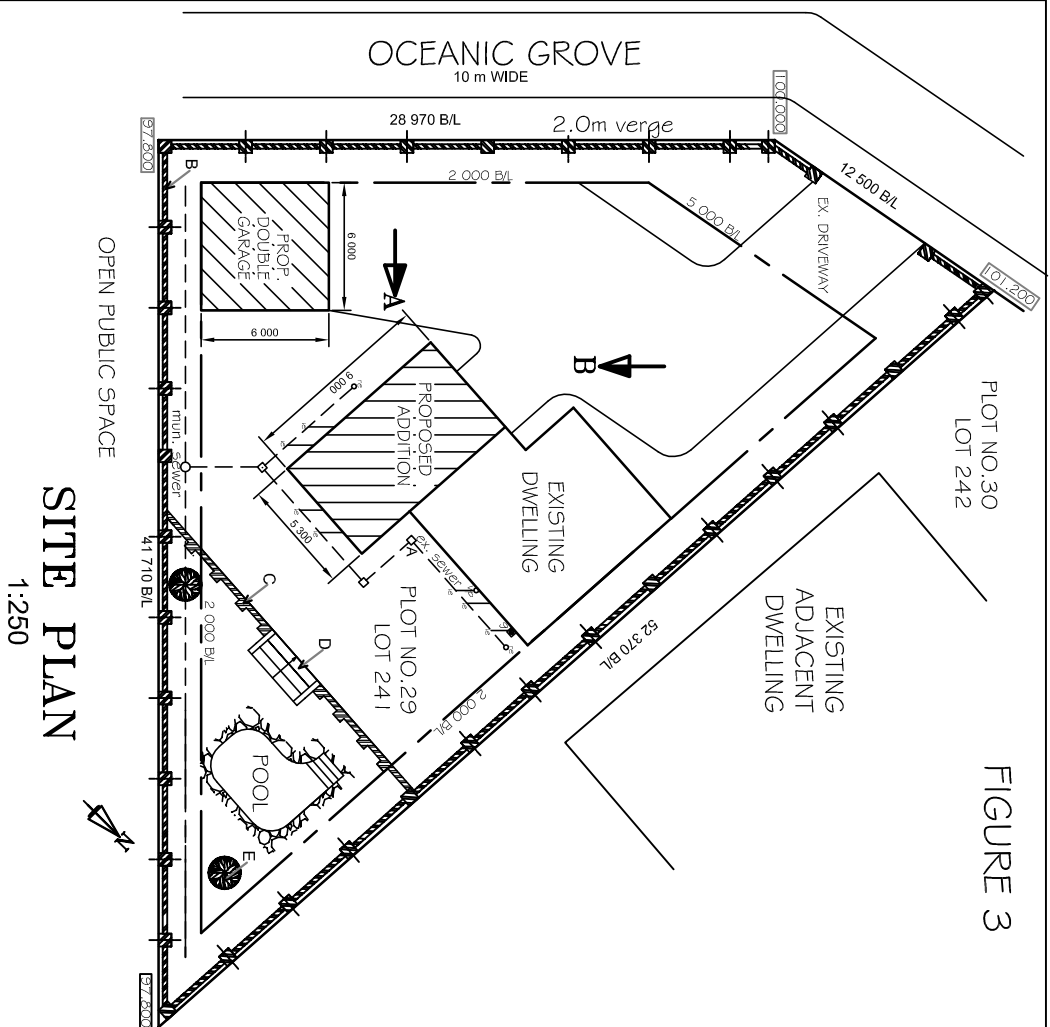


FIGURE 3



SITE PLAN  
1:250

**QUESTION ONE**

Given:

A diagram showing details at the ridge of a roof, section through a wall and a site plan with proposed improvements.

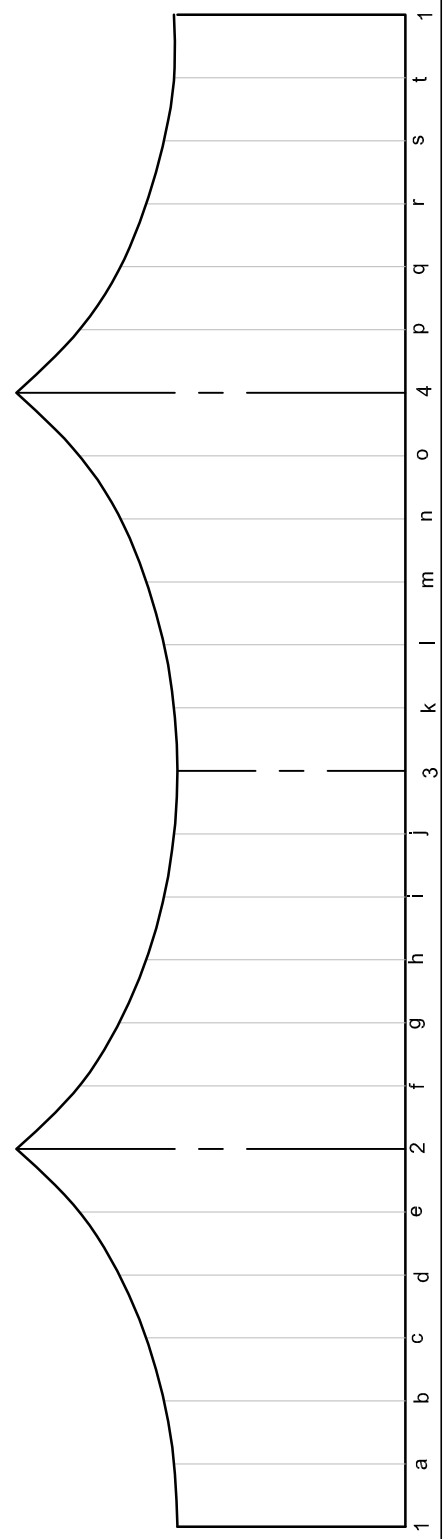
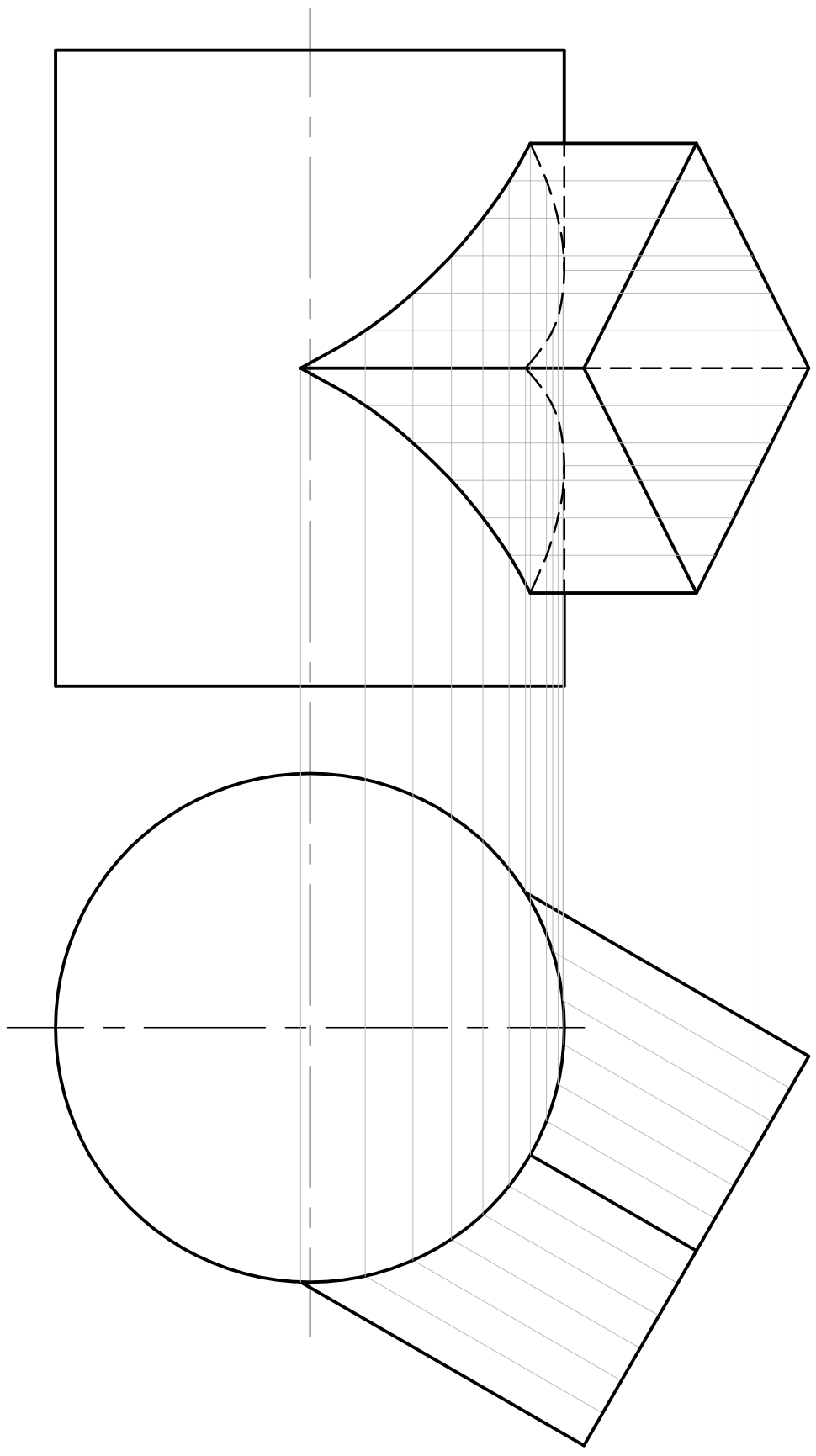
Instructions:

Observe the given drawings and answer the questions in the spaces provided below.

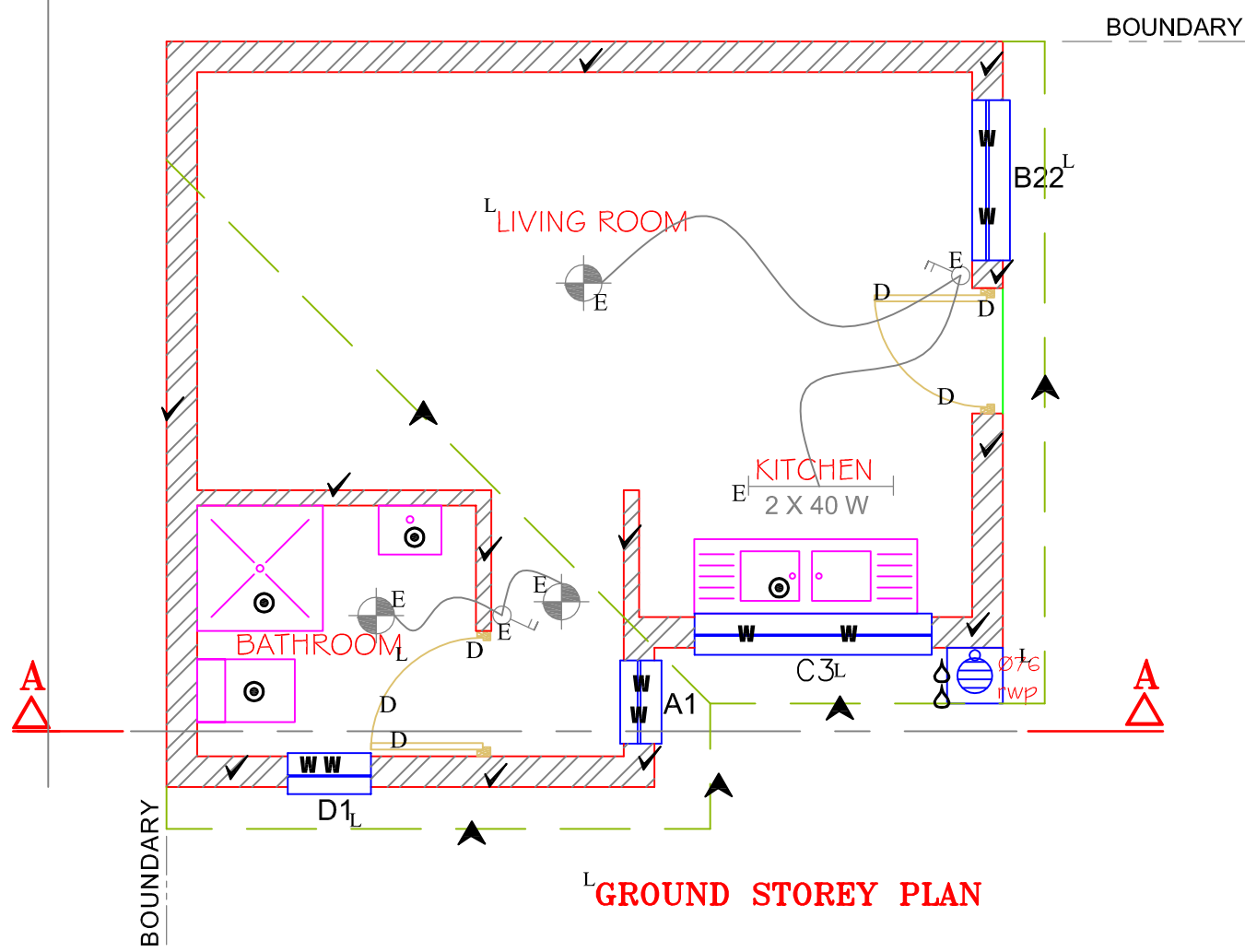
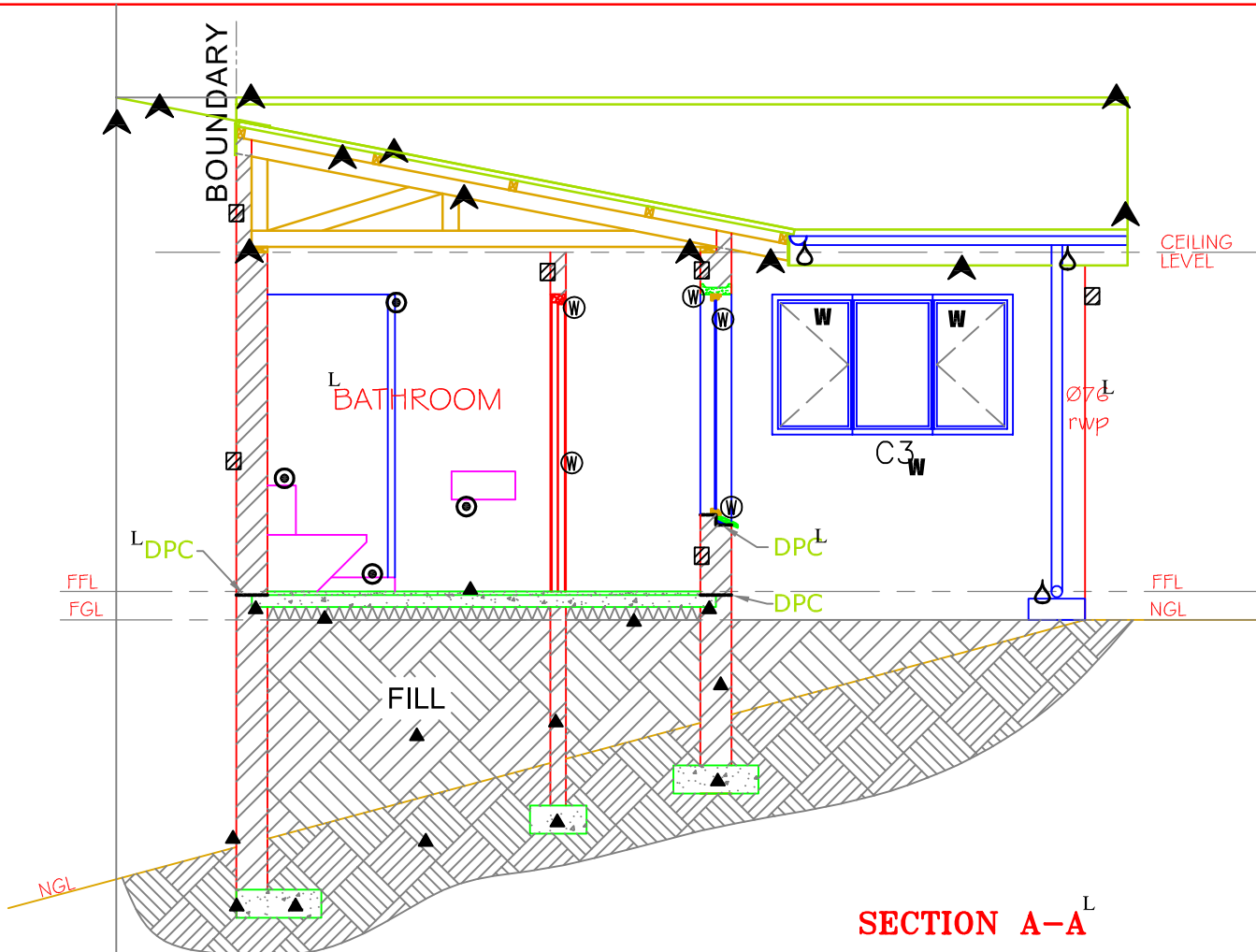
(31)

|   |   |                           |  |
|---|---|---------------------------|--|
| 1.1 Identify the details at the ridge of the roof shown in figure 1.                              |   |                           |  |
| 1.1.1   | 1 | Ridge Cover               |  |
| 1.1.2   | 1 | Purlin                    |  |
| 1.1.3   | 1 | Plastic Underlay          |  |
| 1.1.4   | 1 | Connector Plate           |  |
| 1.1.5   | 1 | Rafter                    |  |
| 1.2 Identify the components of the substructure and part of the superstructure shown in figure 2. |   |                           |  |
| 1.2.1   | 1 | Cavity                    |  |
| 1.2.2   | 1 | Plaster                   |  |
| 1.2.3   | 1 | Weep Hole                 |  |
| 1.2.4   | 1 | Damp Proof Course (DPC)   |  |
| 1.2.5   | 1 | Damp Proof Membrane (DPM) |  |
| 1.2.6   | 1 | Concrete Filling          |  |
| 1.3 What type of wall is illustrated in figure 2?   | 1 | Cavity Wall               |  |
| 1.4 Cross hatch freehand the walls in figure 2 if face bricks were to be used.                    | 2 |                           |  |
| 1.5 Refer to the site plan shown in figure 3 and answer the following questions.                  |   |                           |  |
| 1.5.1 What is the scale of the drawing?   | 1 | 1 : 250                   |  |
| 1.5.2 What is the street address of the proposed development?                                     | 1 | 29 Oceanic Drive          |  |
| 1.5.3 What elevation can be viewed from the direction of arrow A?                                 | 1 | South West Elevation      |  |
| 1.5.4 What elevation can be viewed from the direction of arrow B?                                 | 1 | North West Elevation      |  |
| 1.5.5 How wide is the verge? answer in millimeters  | 1 | 2 000 mm                  |  |
| 1.5.6 What features are represented by:   |   |                           |  |
| A   | 1 | Man Hole                  |  |
| B   | 1 | Boundary Wall             |  |
| C   | 1 | Retaining Wall            |  |
| D   | 1 | Stairway / Steps          |  |
| E   | 1 | Tree                      |  |
| 1.5.7 What do the following abbreviations stand for:  |   |                           |  |
| re  | 1 | Rodding Eye               |  |
| vp  | 1 | Vent / Ventilation Pipe   |  |
| g   | 1 | Gully                     |  |
| ie  | 1 | Inspection Eye            |  |
| 1.5.8 What is the area of the proposed addition?  | 1 | 47,7 m <sup>2</sup>       |  |
| 1.5.9 What is the area of the proposed double garage?   | 1 | 36 m <sup>2</sup>         |  |
| 1.5.10 What is the length of the front boundary? answer in meters                                 | 1 | 12,5 m                    |  |
| <b>TOTAL</b>  |   |                           |  |
| LEARNER'S NAME : _____  |   | GRADE : 12                |  |

**QUESTION TWO**



1 a b c d e 2 f g h i j 3 k l m n o 4 p q r s t 1



# MARKING MEMO

## ASSESSMENT CRITERIA

|   |   |    |     |  |
|---|---|----|-----|--|
|   | FLOOR PLAN                                  | 49 |     |  |
| ✓ | WALLS & HATCHING                            |    | 12  |  |
| ▲ | ROOFLINES                                   |    | 5   |  |
| W | WINDOWS                                     |    | 8   |  |
| D | DOORS                                       |    | 6   |  |
| ◎ | SANITARYWARE                                |    | 4   |  |
| E | ELECTRICAL                                  |    | 6   |  |
| △ | STORMWATERPIPES/GULLEYS                     |    | 2   |  |
| L | LABELS : ROOMDESIGNATION/WINDOW CODES/TITLE |    | 6   |  |
|   | SECTION A-A                                 | 51 |     |  |
| ▲ | SUBSTRUCTURE                                |    | 14  |  |
| ▣ | WALLS & SECTION                             |    | 6   |  |
| ▲ | ROOF & SECTION                              |    | 12  |  |
| W | WINDOWS & DOOR                              |    | 3   |  |
| ⊙ | WINDOW & DOOR SECTION                       |    | 5   |  |
| △ | RAINWATER GOODS                             |    | 3   |  |
| L | LABELS                                      |    | 4   |  |
| ◎ | SANITARYWARE                                |    | 4   |  |
|   | TOTAL                                       |    | 100 |  |

NAME: \_\_\_\_\_

GR/DIV: \_\_\_\_\_

# MARKING

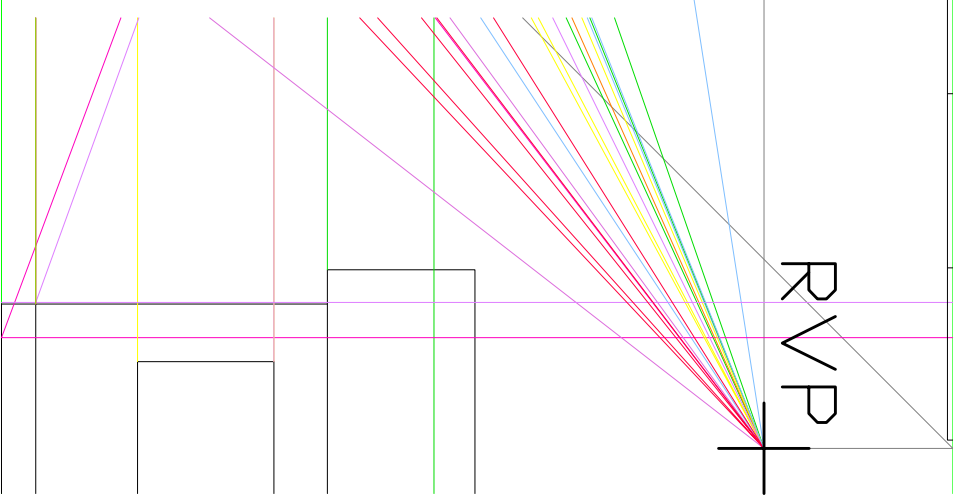
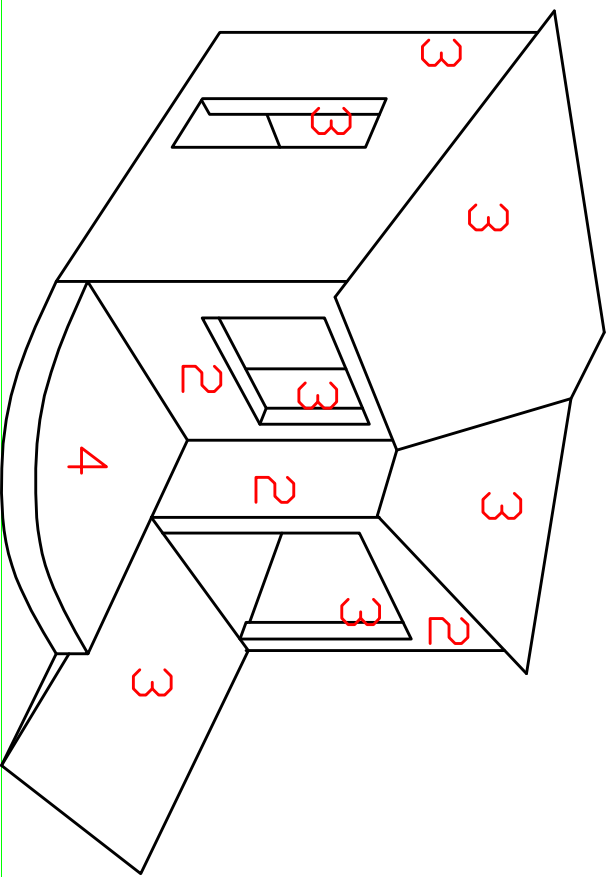
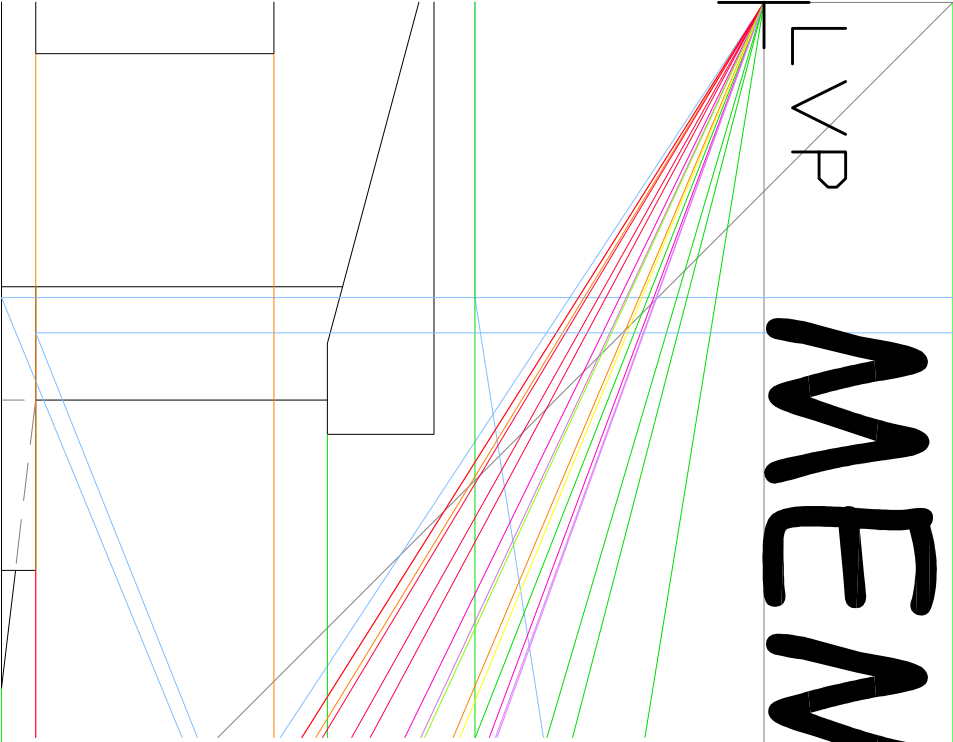
LVP

# MEMO

5

RVP

| ASSESSMENT CRITERIA  |           |                |
|----------------------|-----------|----------------|
| ASPECT               | MAX. MARK | LEARNER'S MARK |
| POINTS & PROJECTIONS | 5         |                |
| OUTLINES             | 31        |                |
| <b>TOTAL</b>         | <b>36</b> |                |



SP