

Electro Critical Skills Resource Suite



Entry Level Literacy and Numeracy Assessment for the Electrotechnology Trades

Enrichment Resource

UNIT 11: Interpreting Plans



managing apprentice progression

An E-Oz Energy
Skills Australia project.



© Commonwealth of Australia 2010. This work is copyright. You may download, display, print and reproduce this material in whole or in part or in modified form (retaining this notice) for your personal, non commercial use or use within your organization. If you use, display or reproduce this material or a modified form of it in whole or in part within your organization you must include the following words in a prominent location within the material in font not less than size 12: “The views expressed in this publication do not necessarily represent the view of the Minister for Education or the Australian Government. The Australian Government does not give any warranty nor accept any liability in relation to the contents of this work.”

Apart from any use as permitted under the Copyright Act 1968, all other rights are reserved. Requests and inquiries concerning reproduction and rights should be addressed to the Commonwealth Copyright Administration, Attorney General’s Department, Robert Garran Offices, National Circuit, Barton ACT 2600 or posted at <http://www.ag.gov.au/cca>

The views expressed in this publication do not necessarily represent the view of the Minister for Education or the Australian Government. The Australian Government does not give any warranty nor accept any liability in relation to the contents of this work.



INTERPRETING PLANS

Interpreting plans is an important part of the electrical trade. Floor plans are often used to show the location of electrical installations. It is important that information is correctly understood to enable the planning, construction and alteration of electrical installations.

LEARNING OUTCOME

- Can accurately read and understand simple floor plans

PERFORMANCE CRITERIA

- Calculates distances using known dimensions
- Calculates direction of north to determine orientation
- Uses principle of Scale to convert dimensions



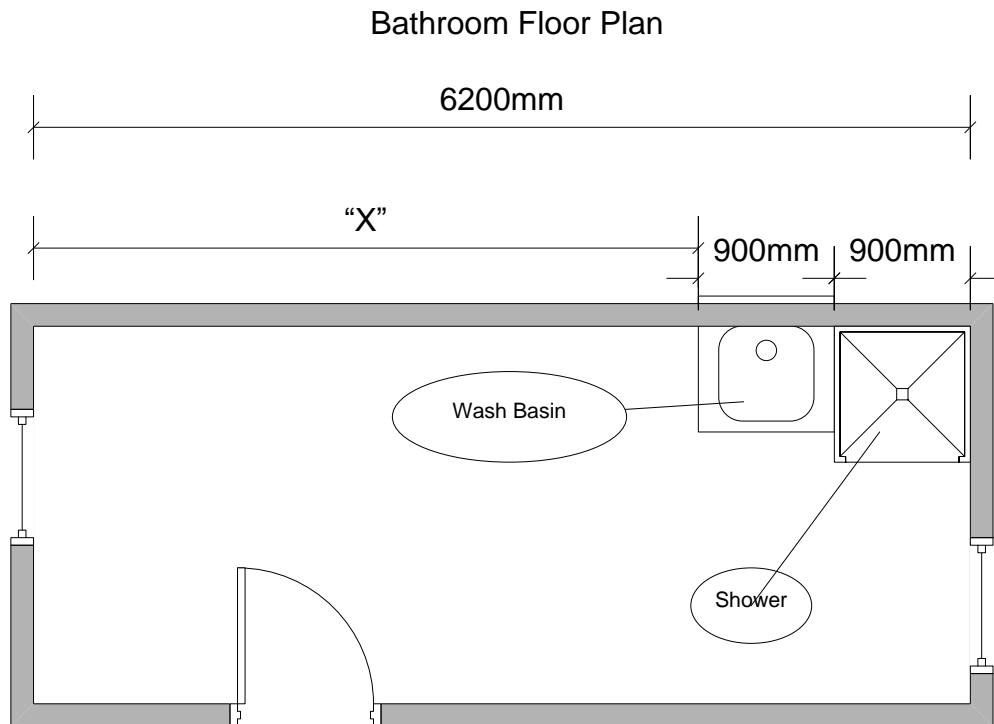
CALCULATING DIMENSIONS

The understanding of plans is necessary to establish the exact positions of electrical installations.

Positions of electrical installations are dictated by room dimensions, the location of appliances and the SAA wiring rules.

Positions are determined by allowing for, the dimensions of appliances and fittings.

Example 1



Dimensions:

Room Length	6.2 metres (6200 cm)
Shower base	90 cm
Wash basin unit	90 cm
Distance of wash basin unit from western wall	xcm

Unknown distance		Room length		Wash Basin Unit		Shower Base
x	=	620	-	(90	+	90)
..	x	=	440 cm			

Answer: The wash basin unit is 5m from the western wall.

SCALE

Most plans are drawn to a scale.

For ease of representation, large dimensions are converted to smaller metric units.

The principle of ratio is used to indicate the scale (Refer to the Ratio Unit 8)

For example. 1 : 1 000 000

1 : 1 000

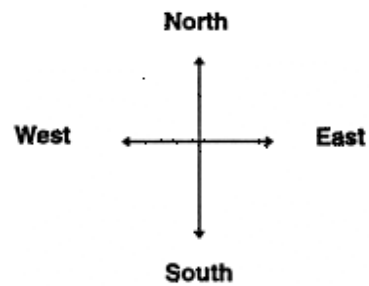
1 : 50

This ratio indicates the relation between distances on the plan with distances in reality. So;

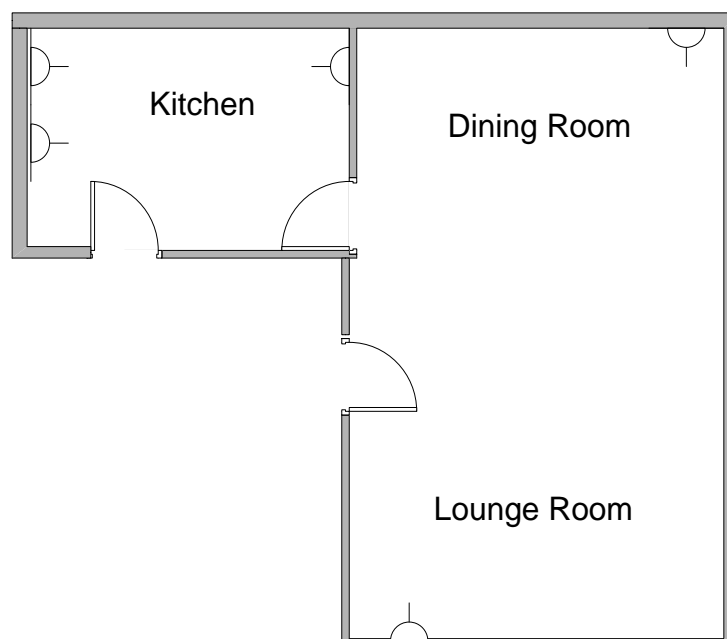
- '1 : 100' means that 1 cm is equivalent to 100 cm (1 metre).
- '1 : 1 million' means that 1 cm is equivalent to 10 kilometres.

ORIENTATION

Plans often show the direction of North to assist with orientation.



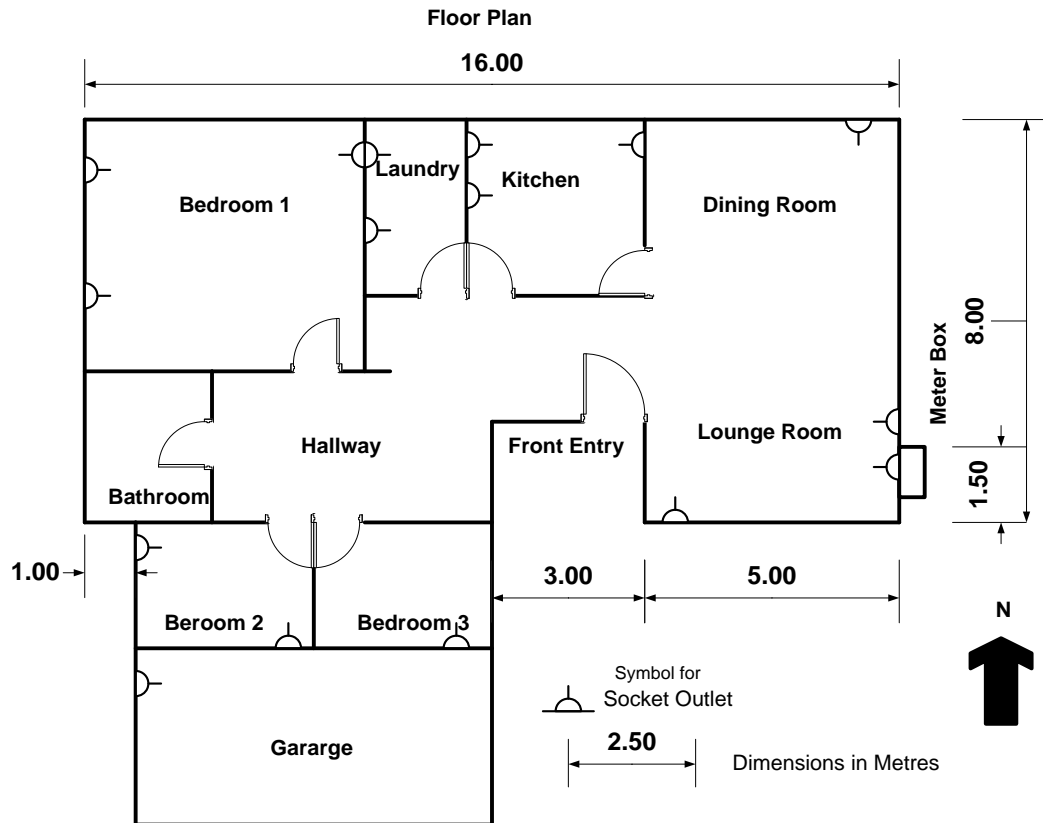
Example 2 The GPO in the Lounge Room is located on the southern wall.



Example 3 The Dining Room is east of the kitchen.

READING FLOORPLANS

EXERCISE 1



- a. How many GPO's are located on the western kitchen wall?

.....

- b. State the position of the following rooms in relation to the kitchen.

- i. The Laundry

.....

ii. The Bathroom

.....

iii. The Dining Room

.....

c. Find the following.

i. The length of the southern wall of Bedroom 2 and Bedroom 3 combined.

ii. The length of the northern wall of the Dining Room.

iii. The length of the southern Kitchen wall.

iv. The length of the northern wall of the Laundry and Bedroom 1 combined.



Use the answer sheet to check your work.

ANSWERS:

EXERCISE 1

- a. **2** GPO's are on the western Kitchen wall.
- b.
 - i. The Laundry is next to and **west** of the Kitchen.
 - ii. The Bathroom is **south west** of the Kitchen on the western exterior wall.
 - iii. The Dining Room is next to and **east** of the Kitchen.
- c.
 - i. Bedroom 2 + Bedroom 3 = 16m - (1m + 3m + 5m)
= 16m - 9m
= 7m
 - ii. Northern wall of the Dining Room = 5m
 - iii. The southern Kitchen wall = 3m
 - iv. Bedroom 1 + Laundry = 16m - 9m
= 7m