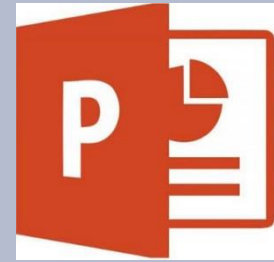


# PowerPoint



**Includes review questions**

Training support material for:

**RIICCM201E**

**Carry out measurements  
and calculations**

**TRAINER'S GUIDE**

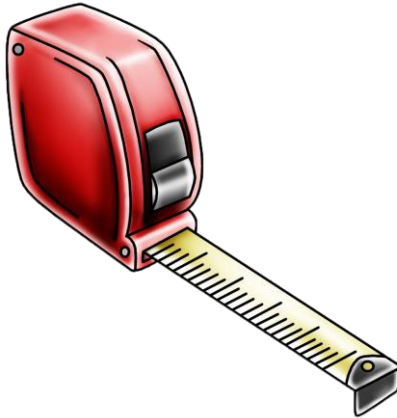
**Produced by:**



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# INTRODUCTION TO MEASUREMENTS AND CALCULATIONS



## Measurements and calculations

Measurements and calculations are used in the resources and infrastructure industries for many different tasks. Measurements and calculations must be accurate and clearly recorded. It includes using measurements and calculations to estimate quantities for various work activities.

Accurate measurements and calculations will make sure that:


*Measurements and calculations (continued)*

If measurements and calculations are not correct, accurate and clearly recorded it may cause:


## Units of measure

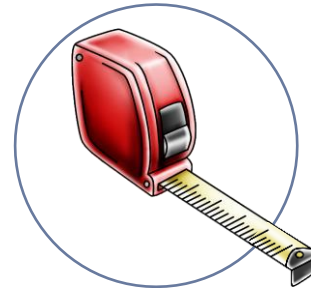
**This learner's guide will always refer to the metric system.**


*Units of measure (continued)*

These tables show how metric and imperial weights and measurements compare with each other.

<b>Metric</b> → <b>Imperial</b>

<b>Imperial</b> → <b>Metric</b>



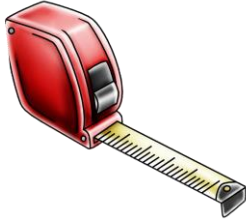
# PLAN AND PREPARE FOR MEASUREMENTS AND CALCULATIONS

## Element 1








## Select and check tools and equipment

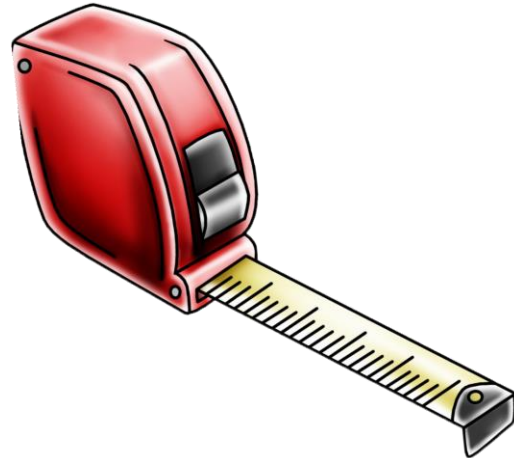
Tool/equipment	Use	Check
		
		
		

Select and check tools and equipment (continued)

Tool/equipment	Use	Check
		
		
		

# PERFORM MEASUREMENTS

## Element 2



## Measurement methods

### Length, height, width and depth


[View examples on the next page](#)

*Length, height, width and depth (continued)*



Obtaining measurements (continued)

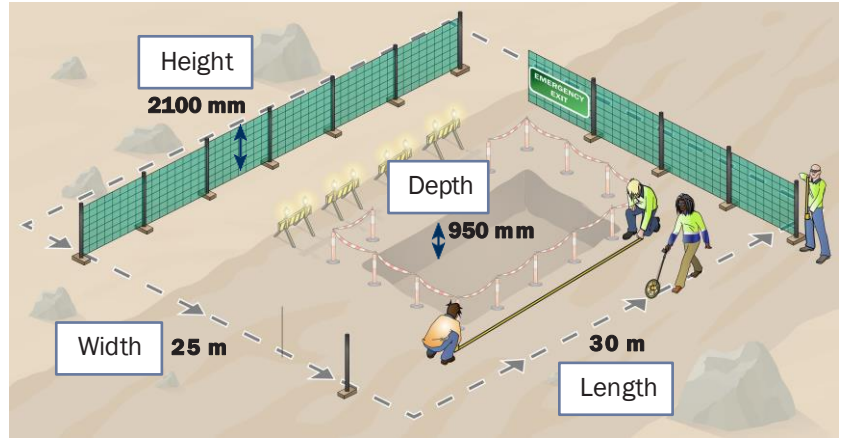
## Medium distances

t

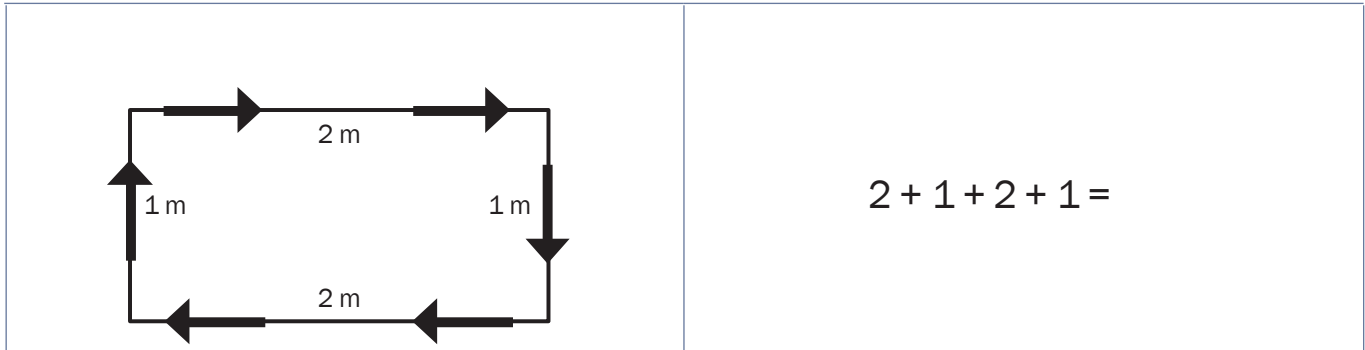


Obtaining measurements (continued)

### Long distances



### Measuring perimeter



# PERFORM CALCULATIONS

## Element 3





## Select appropriate calculation method

There are a number of different ways to do calculations. The correct calculation method must be used for the job you are doing. If the wrong method is used you will end up with incorrect answers.

### Addition (+)

Also known as **plus**, is used to work out the total amount or quantity of something by adding parts together. Addition is used when calculating perimeter, you add all the sides together to get a total.

Manual example	
1. Add 9 and 5 and you get 14.	2. Place the 4 down the bottom on the right and add the 1 to the 8 to make it 9.
3. Add 9 and 9 and you get 18.	4. Place the 18 down the bottom to the left of the 4 and you have the answer.

Electronic example	
1. Enter the number 89	2. Press the <b>(+)</b> key
3. Enter the number 95	4. Press the <b>(=)</b> key and you will have your answer.

Select appropriate calculation method (continued)

## Subtraction (-)

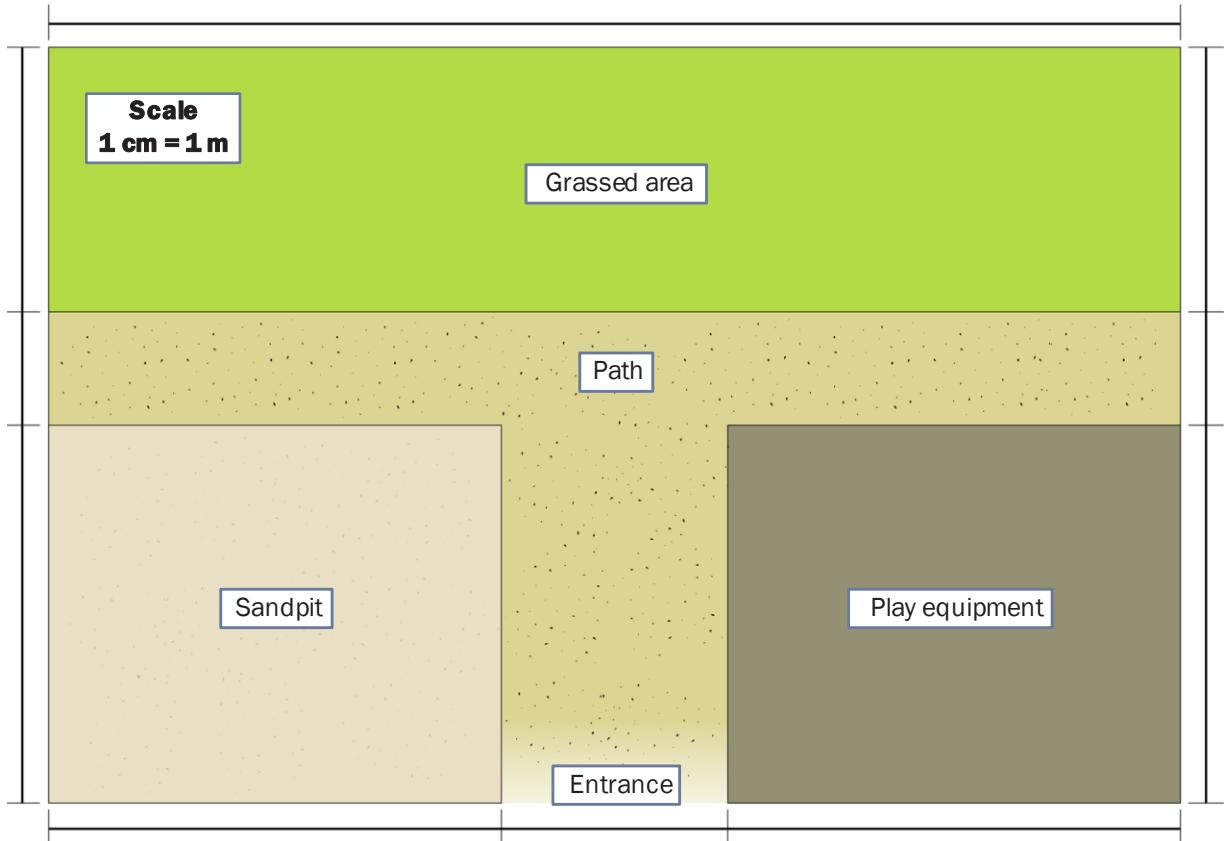
Also known as **minus**, is used to find the total amount of something after some have been taken away.

For example: If you ordered 20 m<sup>3</sup> of road base and used 10.5 m<sup>3</sup> for a job, how much is left over?

Manual example		Electronic example	
1. 3 take away 9 cannot be done, so add 10 to the 3 to make it 13 then add 1 to the 8 to make it 9.	2. 13 take away 9 equals 4. Place the 4 down the bottom on the right.	1. Enter the number 93	2. Press the <b>(-)</b> key
3. 9 take away 9 equals 0.	4. Place the 0 down the bottom next to the 4 and you have the answer.	3. Enter the number 89	4. Press the <b>(=)</b> key and you will have your answer.

Calculating project values (continued)

**Plan  
Scope**



# ESTIMATE QUANTITIES

## Element 4



## Select appropriate formulas



Select appropriate formulas (continued)

**Materials required are:**

