203: Electrical installations technology  
**Worksheet 4: Symbols and scales**

**Answer guide**

Learner: Date:

1. **The length of a motorway is 600 kilometres.  If 0.5cm represents 50 kilometres, calculate the length of the motorway on the map.**
2. **The dimensions of a building are 250 metres by 120 metres. If 10mm represents 20 metres on a scale drawing, calculate the dimensions of the building on the drawing.**
3. **If one centimetre represents 10 metres, calculate the dimensions used to make a scale drawing of a room 20 metres by 40 metres.**
4. **If on a scale drawing a particular dimension is 120mm, using a scale of 1:10 how many metres does this represent?**
5. **If 1cm represents 75 kilometres on a map, calculate how many centimetres will represent 1,500 kilometres.**

Site drawings and scales

Aims and objectives

At the end of this activity, you should be able to:

* read a site drawing and calculate scales
* interpret symbols.

**1** Using the drawing, complete the ‘take off sheet’ below.

**2** Using the drawing scale, determine the distance between each luminaire and indicate on the drawing.

**3** Determine the floor area of both rooms – the scale is 1:100.

*Stretch task* – calculate the cable length for the light installation making any assumptions you want on the actual route and quantity of circuits required. Indicate the routes you have chosen on the drawing.

Time allowed: 1 hour Ceiling height: 3000mm

Learner: Date:

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| **Take off sheet** | | |
| **Symbol** | **Description** | **Quantity** |
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