RUNNING TABLE B1 BACKWARDS TO FIND A CABLE'S LENGTH

THE DESIGNER SAID 42 METRES. IS IT?

The same formula rearranged, and the most useful of the three. You are given a **measured** $R_1 + R_2$ and asked for the length.

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length (m) = (measured Ω × 1000) ÷ mΩ/m
```

2.5/1.5 TWIN AND EARTH MEASURING 0.63 Ω. HOW LONG IS THE CIRCUIT?

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mΩ/m for 2.5/1.5 = 19.51

length = (0.63 × 1000) ÷ 19.51
       = 630 ÷ 19.51
       = 32 metres
```

✋ **Do not take the length the question hands you.** In this one the designer had allowed **42 m**. The measurement says 32 m. The answer is 32 — calculate the length from the result, do not assume the stated figure is it.

Why designer and installer disagree.

The designer estimates the route off the drawings — where the consumer unit sits, every point it has to reach, round the edges of rooms. The installer turns up and finds a shorter way: under the floor and up a wall instead of along the ceiling and down. Lengths drop, or grow, very easily.

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