1 An experiment uses the following equation to find the resistivity ρ of an copper wire.

$$R = \frac{\rho l}{A}$$

where

A is the cross-sectional area of the wire

d is the diameter of the wire

l is the length of the wire and

R is its resistance.

Numerical values from one experiment were

d = (6.30 ± 0.05) mm

l = 2.71 ± 0.01 m

R = 939 ± 3 Ω

Calculate the resistivity of copper wire together with its uncertainty. Show the method you used to determine its uncertainty.

resistivity = …… ± …… Ω m [4]

[Total : 4]