

Answer on Question #64837-Physics-Other

If value of v is 1.40 ± 0.05 then what is the absolute uncertainty in calculated value of v^2 ?

Solution

The relative uncertainty in calculated value of v^2 :

$$\frac{\Delta(v)^2}{v^2} = \frac{2\Delta v}{v}.$$

The absolute uncertainty in calculated value of v^2 :

$$\Delta(v)^2 = 2v\Delta v = 2 \cdot 1.40 \cdot 0.05 = 0.14.$$

Answer: 0.14.

Answer provided by <https://www.AssignmentExpert.com>