

Answer on Question #68605-Physics-Other

If a unit vector is represented by $0.5i\text{cap}-0.8j\text{cap}+ck\text{cap}$ then what is the value of 'c'?

Solution

For the unit vector we need

$$0.5^2 + (-0.8)^2 + (c)^2 = 1$$

$$(c)^2 = 1 - (0.5^2 + (-0.8)^2) = 0.11.$$

$$c = \pm\sqrt{0.11} \approx \pm 0.33.$$

Answer: $\pm\sqrt{0.11} \approx \pm 0.33$.

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