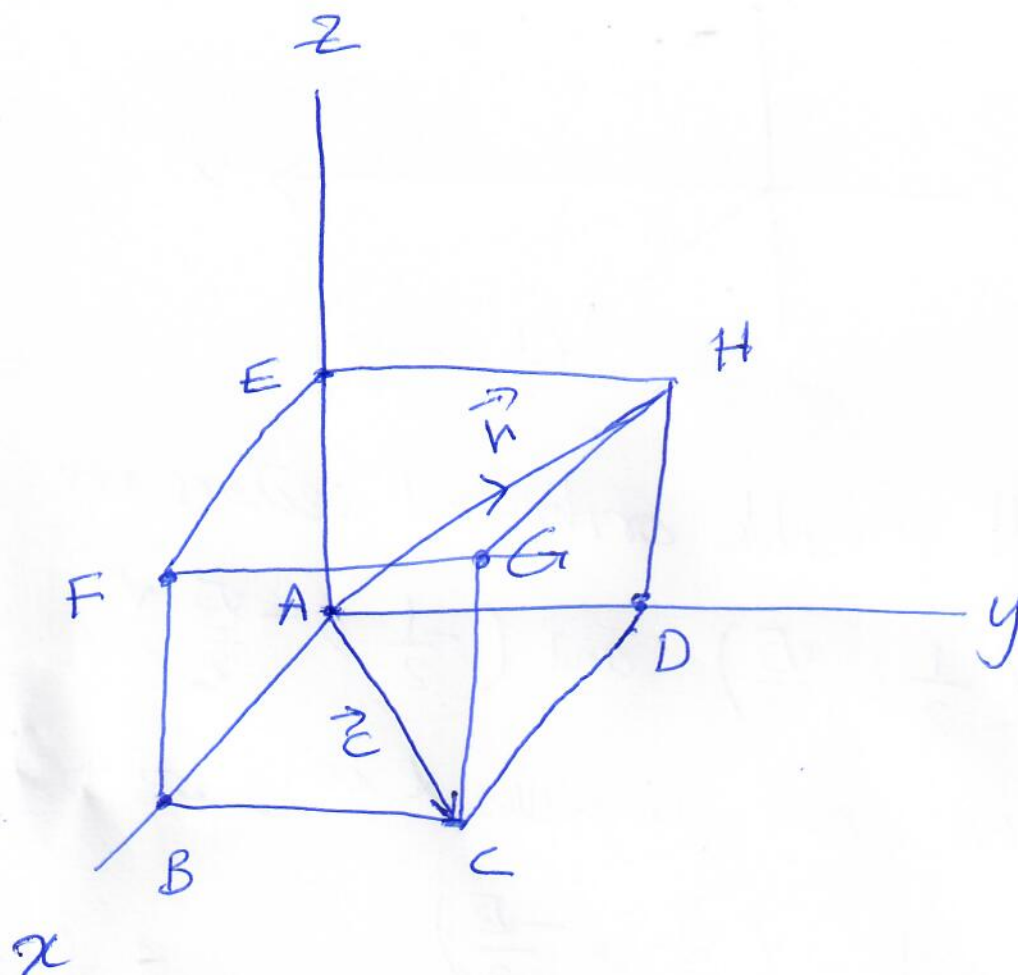


# Question 1



The unit cube, so the length of the every part is 1.

$$\vec{c}: A \rightarrow C \quad C = (1, 1, 0) = \hat{i} + \hat{j} + 0\hat{k}$$

$$H = (0, 1, 1) = 0\hat{i} + \hat{j} + \hat{k}$$

$$\vec{c} \cdot \vec{h} = |\vec{c}| |\vec{h}| \cos \theta$$

$$(1, 1, 0) \cdot (0, 1, 1) = \sqrt{1^2 + 1^2 + 0} \sqrt{0^2 + 1^2 + 1} \cos \theta$$

$$1 = \sqrt{2} \sqrt{2} \cos \theta \Rightarrow \cos \theta = \frac{1}{2} \Rightarrow \theta = \frac{\pi}{2}$$

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