

Q Find the direction ratio of the given

$$\vec{A} = \hat{i} + \hat{j} - 2\hat{k}$$

Ans $x = 1$ $y = 1$ $z = -2$

Now, finding position vector

$$\begin{aligned} |\vec{A}| &= \sqrt{x^2 + y^2 + z^2} \\ &= \sqrt{1^2 + 1^2 + (-2)^2} \\ &= \sqrt{1 + 1 + 4} \\ &= \sqrt{6} \end{aligned}$$

Now finding direction cosines

$$l = \frac{x}{|\vec{A}|} = \frac{1}{\sqrt{6}}$$

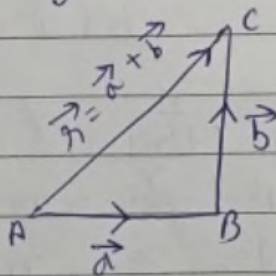
$$m = \frac{y}{|\vec{A}|} = \frac{1}{\sqrt{6}}$$

$$n = \frac{z}{|\vec{A}|} = \frac{-2}{\sqrt{6}}$$

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Addition of Vectors

Triangle Law



$$\vec{AC} = \vec{AB} + \vec{BC}$$

Norm law

