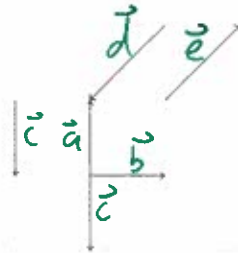
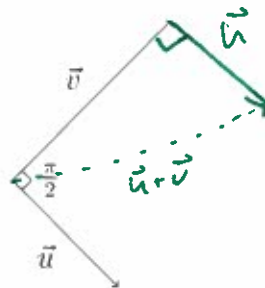


Quick Hit 10

1. Name the following vectors by labeling each arrow with a letter. Make sure to give the same vectors the same name and distinct vectors different names.



2. Consider the following vectors \vec{u} and \vec{v} where $\|\vec{u}\| = 4$ and $\|\vec{v}\| = 6$. Draw the vector $\vec{u} + \vec{v}$ and compute $\|\vec{u} + \vec{v}\|$.



Since $\|\vec{u}\| = 4$, $\|\vec{v}\| = 6$, and the triangle is a right triangle with hypotenuse $\|\vec{u} + \vec{v}\|$, we see

$$\begin{aligned} \|\vec{u} + \vec{v}\|^2 &= \|\vec{u}\|^2 + \|\vec{v}\|^2 \\ &= 16 + 36 \\ &= 52 \\ \Rightarrow \|\vec{u} + \vec{v}\| &= \sqrt{52} \end{aligned}$$