

Vector Practice Questions

1. Define a vector and give two examples.
2. Find the magnitude of vector $\mathbf{a} = (3, 4)$.
3. Add vectors $\mathbf{a} = (2, 5)$ and $\mathbf{b} = (4, -1)$.
4. Find the unit vector of $\mathbf{a} = (6, 8)$.
5. Find dot product of $\mathbf{a} = (1, 2, 3)$ and $\mathbf{b} = (4, 5, 6)$.
6. If $|\mathbf{a}| = 5$ and $|\mathbf{b}| = 3$, angle between them is 60° , find $\mathbf{a} \cdot \mathbf{b}$.
7. Subtract $\mathbf{b} = (7, 3)$ from $\mathbf{a} = (10, -2)$.
8. Find the vector between points A(2, 3) and B(7, 9).
9. Check if vectors $(2, 4, 6)$ and $(1, 2, 3)$ are parallel.
10. Find cross product of $\mathbf{a} = (1, 0, 0)$ and $\mathbf{b} = (0, 1, 0)$.