

Physics: Learning Objectives

Vectors

1. Distinguish between vector and scalar quantities and provide examples of each.
2. Describe the properties of vectors and apply vector operations correctly.
3. Identify and draw coordinates systems for two-dimensional motion.
4. Distinguish between vector composition and vector resolution.
5. Apply both graphical to determine vector resultants
6. Apply the mathematical method using the Pythagorean Theorem and trigonometric functions to determine resultant vectors.
7. Describe what vector components are and how to use resolution to obtain vector components along an x-y coordinate system.
8. Relate a vector and its components to their quadrant in an x-y coordinate axis system.
9. Apply the Pythagorean Theorem and trigonometry to resolve vectors into their components and to calculate their numerical values.