

55. (a) The magnitude of the vector $\vec{a} = 4.0\vec{d}$ is $(4.0)(2.5) = 10$ m.
- (b) The direction of the vector $\vec{a} = 4.0\vec{d}$ is the same as the direction of \vec{d} (north).
- (c) The magnitude of the vector $\vec{c} = -3.0\vec{d}$ is $(3.0)(2.5) = 7.5$ m.
- (d) The direction of the vector $\vec{c} = -3.0\vec{d}$ is the opposite of the direction of \vec{d} . Thus, the direction of \vec{c} is south.