

Vectors in 2-D Practice Question: Change in Velocity

A car moving at 25.0m/s [20.0° N of E] turns a corner. 20.0 s later it is moving at 18.0 m/s [15.0° E of S].

- a) Draw a sketch of the situation.
- b) Use GRAPHICAL methods (scale diagram) to determine the change in velocity, $\Delta\mathbf{v} = \mathbf{v}_f - \mathbf{v}_i$
- c) Use ANALYTICAL methods to determine the change in velocity, $\Delta\mathbf{v} = \mathbf{v}_f - \mathbf{v}_i$
- d) Use your value from part (c) to determine the acceleration of the car while it's in the process of turning (magnitude and direction).