

0.1 Homework

5. A train at a constant 60.0 km/h moves east for 40.0 min, then in a direction 50.0° east of due north for 20.0 min, and then west for 50.0 min. What are the (a) magnitude and (b) angle of its average velocity during this trip?

$$= 40\hat{i} + 20\cos(40)\hat{i} + 20\sin(40)\hat{j} - 50\hat{i}$$

$$= 5.32089\hat{i}, 12.8558\hat{j}$$