

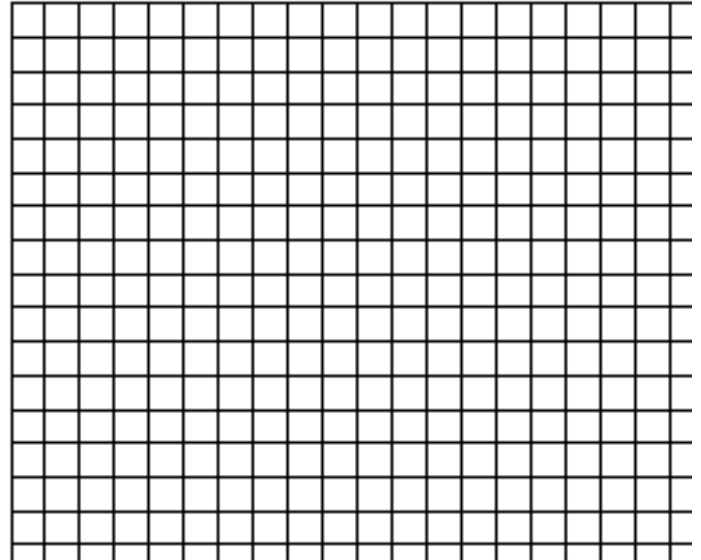
Speed & Velocity 2

Name: _____

1) Two motorcycles leave from the same spot at the same time. Bike 1 travels at +50 mi/hr for 1.5 hr, stops for 1.5 hr, then continues on at 60 mi/hr for 4 hr. Bike 2 travels at +45 mi/hr for 6 hr.

a) Draw a position-time graph for the two bikes in this information.

b) At what time(s) are the two bikes at the same position?



2) Ethan decided to race Michael Phelps in the 200 m freestyle last week. Michael swam at a blistering 1.23 m/s, while Ethan swam at 0.51 m/s. How much of a head start would Michael need to give Ethan to have tied a race? Give your answer in terms of time and distance.

3) Gene is riding his unicycle at 12.3 m/s east, while Eric is riding his horse at 16.5 m/s west. If Gene and Eric started 357 m apart, where and when would they collide?