

Present neatly. Justify for full credit. ~~No Calculators.~~

Name _____ Score _____ ~6 minutes

A police car traveling south toward Sioux Falls at 160 km/h pursues a truck traveling east away from Sioux Falls, Iowa, at 140 km/h. At time $t = 0$, the police car is 20 km north and the truck is 30 km east of Sioux Falls. Calculate the rate at which the distance between the vehicles is changing: a) at time $t = 0$ b) 5 minutes later.