

Exercise 1. A circular oil slick of uniform thickness is caused by a spill of 1 m^3 of oil. The thickness of the oil slick is decreasing at the rate of 0.1 cm/h . At what rate is the radius of the slick increasing when the radius is 8 m ?

Exercise 2. At noon, ship A is 100 km west of ship B. Ship A is sailing south at 35 km/h and ship B is sailing north at 25 km/h . How fast is the distance between the ships changing at $4:00 \text{ P.M.}$?