More Related Rates

1. Ship A is sailing due south at 16 km/hr and ship B, 32 km south of ship A, is sailing due east at 12 km/hr.
2. At what rate are they separating after 1 hour?
3. At what rate are they separating after 2 hours?
4. When do they cease to approach each other and how far apart are they at that time?
5. A floodlight is on the ground 45 meters from a building. A person 2 meters tall runs from the floodlight directly towards the building at the rate of 5 meters/second. How fast is the length of his shadow changing when he is 15 meters from the building?