

Related Rates Practice Problems

1. Swifty Swine's trough is 12 feet long and 3 feet across the top. Its ends are isosceles triangles with altitudes 3 feet. If water is being pumped into the trough at 2 cubic feet per minute, how fast is the water level rising when the water is 1 foot deep?
2. Lois is standing at the top of a 25 feet long ladder that is leaning against the wall of her house. Stewie is pulling the base of the ladder away from the wall at a rate of 2 feet per second. How fast is Lois falling down the wall when Stewie is 7 feet from the wall?
3. Lois is standing at the top of a 25 feet long ladder that is leaning against the wall of her house. Stewie is pulling the base of the ladder away from the wall at a rate of 2 feet per second. Find the rate at which the angle between the ladder and the wall of the house is changing when Stewie is 7 feet from the wall.