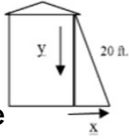


Ex 1:

A 20 foot ladder is leaning against a house. The foot of the ladder begins to slide away from the house at a rate of 2 feet/second. How fast is the top of the ladder sliding down the wall when the foot of the ladder is 12 feet from the house?



3

Ex 2:

A boat is pulled into a dock by a rope attached to it and passing through a pulley on the dock positioned 5 meters higher than the boat. If the rope is being pulled in at a rate of 2 m/sec, how fast is the boat approaching the dock when it is 12 meters away from the dock?

4

Ex 3:

In a right triangle, leg x is increasing at the rate of 2 m/s while leg y is decreasing so that the area of the triangle is always equal to $6 m^2$. How fast is the hypotenuse changing when $x = 3 m$?

5

Ex 4:

Cars A and B are approaching each other at an intersection. Car A is approaching north at 70 km/h & Car B is approaching east at 60 km/h. What rate are the cars approaching when car A is 3 km from the intersection & Car B is 4 km from the intersection?

6