Teacher/User Name: E. Young

Practice Problems

Name:_____

Period: _____ Date: _____

Form #37192618234

Step-By-Step

Answers

Save this Test! / Turn Into a Puzzle or Board Game!

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Solve:

1) A 25 ft ladder leans against a wall. When the bottom of the ladder is 5 feet from the wall, the ladder slides away from the wall at a rate of 1.4 ft/s. Find the velocity of the ladder as it's sliding down the wall at this moment.

2) One train travels west at 140 mph towards Computer City, while a second train travels north at 190 mph away from Computer City. At time t = 0, the first train is 20 miles east and the second train is 20 miles north. Find the rate at which the distance between the trains is changing at time t = 30 minutes.

3) Water pours into a conical tank of height 6 ft and radius 3 ft at a rate of 2.8 ft^3/min. How fast is the water level rising when it is 1 ft high?

4) A 25 ft ladder leans against a wall. When the bottom of the ladder is 5 feet from the wall, the ladder slides away from the wall at a rate of 2.6 ft/s. Find the rate of change of the angle θ between the ladder and the ground at that moment.

5) Water pours into a fishtank at a rate of 2.8 ft^3/min. How fast is the water level rising if the base of the tank is a rectangle with dimensions 5 ft by 7 ft?

6.) A 5 meter ladder leaning against a wall has its lower part moving away from the wall at the rate of 1 meter/second. At what speed is the top of the ladder moving down when the lower part of the ladder is 2 meters away from the wall?