Group Memebers: _____ _____

_____ _____

Classwork 3 - Related Rates

1. Water leaking onto a floor creates a circular pool with an area that increases at the rate of 3 cm^2/min. How fast is the radius of the pool increasing when the radius is 10 cm?

Picture:

Know: _____

Find: _____

Equation:_____

Work:

Final Answer: _____

_____ _____

Classwork 3 - Related Rates

2.   A balloon rises at the rate of 8 ft./sec. from a point on the ground 60 feet from an observer. Find the
        rate of change of the angle of elevation when the balloon is 25 feet above the ground.

        Picture:

        Know: _____

        Find: _____

        Equation:_____

        Work:

        Final Answer: _____

Group Memebers: _____ _____

_____ _____

Classwork 3 - Related Rates

3.   A particle is moving in a circular orbit $x^2 + y^2 = 25$. As it passes through the point (3, 4), its y coordinate is decreasing at the rate of 2 units per second. How is the x coordinate changing?

Picture:

Know: _____

Find: _____

Equation:_____

Work:

Final Answer: _____

Group Memebers: _____ _____

_____ _____

Classwork 3 - Related Rates

4.   A conical paper cup 8 inches across the top and 6 inches deep is full of water. The cup springs a leak at the bottom and loses water at the rate of 2 cubic inches per minute. How fast is the water level dropping at the instant when the water is exactly 3 inches deep?

Picture:

Know: _____

Find: _____

Equation:_____

Work:

Final Answer: _____