

# Quiz 10

*Name:* \_\_\_\_\_

1. When a circular metal plate is heated, its radius increases by  $.01$  cm/min. At what rate is the plate's area increasing when the radius is  $50$  cm?
2. Cars A and B are traveling along perpendicular straight-line roads; each car is moving toward the point where the roads intersect. Car A is moving at  $60$  mph, and car B is moving at  $66$  mph. At what rate is the distance between the cars changing when car A is  $5$  miles from the intersection point and car B is  $12$  miles from the intersection point?