

INTRODUCTION TO CALCULUS

MATH 1A

UNIT 36: WORKSHEET

Related rates

1: An underwater oil spill releases oil at the constant amount. The area $A(r) = \pi r^2$ of the oil increases with $A'(r(t)) = 5$. What is the rate of change of r ?



2: The resistance R , voltage U and current I are related by

$$U = RI .$$

Assume the voltage is $U = 4$ and the resistance $R(t)$ increases by a constant amount $R' = 2$. What is the rate of change of I ?

