

Math 1121
Homework #12
#30, 64a

$$\begin{aligned} \frac{d}{dt} 4t(2t^5+3)^4 &= 4t \cdot 4(2t^5+3)^3 \cdot 10t^4 + (2t^5+3)^4 \cdot 4 \end{aligned}$$

$$\begin{aligned} R(Q) &= Q \left(C - \frac{Q}{3} \right)^{1/2} \\ R'(Q) &= Q \cdot \frac{1}{2} \left(C - \frac{Q}{3} \right)^{-1/2} \cdot \left(-\frac{1}{3} \right) + \left(C - \frac{Q}{3} \right)^{1/2} \cdot 1 \end{aligned}$$