Exrcise 2B. Consider a function that relates tax revenues R, in billions of dollars, to the average tax rate t such that $R = 350t - 500t^2$.

(a) What tax rate(s) is consistent with raising tax revenues equal to \$60 billion?

(b) What tax rate(s) is consistent with raising tax revenues equal to \$61.25 billion?

(c) What tax rate is consistent with the maximum tax revenue? t^*

(a) $60 = 350t - 500t^2$

$-500t^2 + 350t - 60 = 0$

$-10(50t^2 - 35t + 6) = 0$

$(5t-2)(10t-3) = 0$

$t = \frac{2}{5}, \frac{3}{10}$ #

(b) $-500t^2 + 350t - 61.25 = 0$

$t = 0.35$ #

(c) $\frac{dR}{dt} = 0$

$350 - 1000t = 0$

$-1000t = -350$

$t = 0.35$ #