Mathematics 122

Quiz #26 Name: Key

You must show your work to get full credit.

1 pt (1) As review on derivatives compute the derivative of $h(r) = 2r^3e^{2r}$.

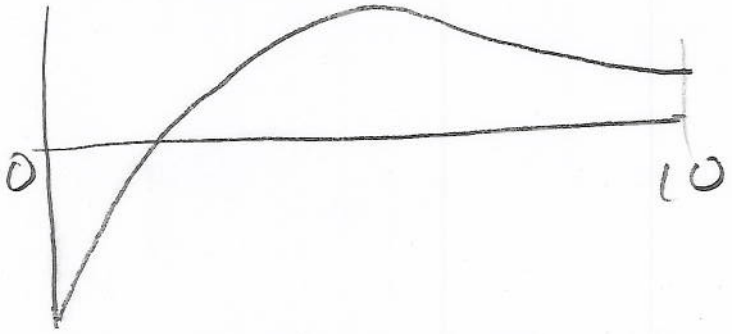
$h'(r) = (2r^3)'e^{2r} + 2r^3(e^{2r})'$

$= 6r^2e^{2r} + 2r^3e^{2r}\,2$

$h'(r) = \underline{6r^2e^{2r} + 4r^3e^{2r}}$

(2) Let $f(x) = (x-1)(1.35)^{-x}$

2 pts (a) Use your calculator to graph $y = f(x)$ for $0 \le x \le 10$.



(b) Find the global maximizer and the maximum value on $0 \le x \le 10$.

Used 2nd calc maximum

1 pt

maximizer (x value) 4.332

maximum value (y value) .9080

1 pt. (c) Find the global minimizer and the minimum value on $0 \le x \le 10$.

This is at the left end point

minimizer (x value) 0

minimum value −1