

Math 101 (091)
Quiz 2 v1 (2.8-3.9)

Name: _____ ID #: _____ Section #: _____ Serial #: _____

1. Find the equation of the tangent line to the curve $y = \frac{x}{\ln x}$ at $x = e$.
 2. The equation of motion of a particle moving in a straight line is $s(t) = t^4 - 2t^3 - 12t^2$, $t \geq 0$. When is the particle speeding up?
 3. Find $y^{(3)}$ if $y = x \cos x$.
 4. If $h(x) = f(x) \tan^{-1}[g(x)]$, $g(0) = 0$, $g'(0) = 1$, $h'(0) = 2$, $f'(0) = 3$, find $f(0)$.
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Math 101 (091)
Quiz 2 v2 (2.8-3.9)

Name: _____ ID #: _____ Section #: _____ Serial #: _____

1. Find the equation of the tangent line to the curve $y = \tan^{-1}(\cos x)$ at $x = 0$.
 2. The equation of motion of a particle moving in a straight line is $s(t) = t^4 - 2t^3 - 12t^2$, $t \geq 0$. When is the particle slowing down?
 3. Find $y^{(3)}$ if $y = xe^x$.
 4. If $h(x) = \sqrt{f(x) + \sqrt{g(x)}}$, $g(0) = 1$, $g'(0) = 2$, $h'(0) = 2$, $f'(0) = 3$, find $f(0)$.
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