

Your Name:

Instructor: Steven Clontz

1. The position of a particular object is given by $p(t) = -t^2 + 2t + 3$. Find its displacement from $t = 1$ to $t = 3$.

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2. The position of a particular object is given by $p(t) = -t^2 + 2t + 3$. Find its average velocity from $t = 1$ to $t = 3$.

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3. The position of a particular object is given by $p(t) = -t^2 + 2t + 3$. Find its position when $t = 2$.
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4. The position of a particular object is given by $p(t) = -t^2 + 2t + 3$. Find its velocity when $t = 2$.

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5. The position of a particular object is given by $p(t) = -t^2 + 2t + 3$. Find its speed when $t = 2$.

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6. The position of a particular object is given by $p(t) = -t^2 + 2t + 3$. Find its acceleration when $t = 2$.
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7. Find $\frac{dy}{dx}$ if $y = -7x^2 + \frac{1}{x} - \sin(3.2)$.

8. Find $\lim_{h \rightarrow 0} \frac{f(x+h) - f(x)}{h}$ where $f(x) = 3e^x$.

9. Find $\frac{dr}{d\theta}$ if $r = (\theta + 7)(e^\theta)$.

10. Find $\frac{d}{ds} \left[\frac{s^2 + 1}{s^2 - 1} \right]$
