

Name:
J#:
Date: 2017 June 16

Exercise Type:

Quiz

Standard: This student is able to...	Mark:
C04: VectFuncSTNB. Compute and apply the arclength parameter and TNB frame for a vector function.	
2/4	★ reattempt due on:

Consider the curve parametrized by $\mathbf{r}(t) = \langle 2t, \ln(\sec(2t)) \rangle$ for $-\frac{\pi}{4} \leq t \leq \frac{\pi}{4}$. It follows that $\frac{d\mathbf{r}}{dt} = \langle 2, 2 \tan(2t) \rangle$ and $\frac{d\mathbf{T}}{dt} = \langle -2 \sin(2t), 2 \cos(2t) \rangle$. Compute the normal vector and curvature at the point on this curve where $t = \frac{\pi}{8}$.

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S05: MulivarFunc. Sketch and analyze the domain, level curves, and graph of a two-variable real-valued function.	
1/3	★ reattempt due on:

Sketch the three level curves for the function $f(x, y) = x - y^2$ that pass through the points $\langle 3, 2 \rangle$, $\langle 1, -1 \rangle$, and $\langle 2, 1 \rangle$.