

Solutions Practice Ch 2 TEST

#6 $s(t) = (t^2 - 1)^3$ $s'(t) = 3(t^2 - 1)^2 \cdot 2t$

~~s'(t)~~ $s'(t) = 3(t^4 - 2t^2 + 1) \cdot 2t$

$$= (3t^4 - 6t^2 + 3)2t$$

$$= 6t^5 - 12t^3 + 6t$$

*
I would
use the
TI-89

$$s''(t) = 30t^4 - 36t^2 + 6$$

$$s''(2) = 30(2)^4 - 36(2)^2 + 6$$

$$= 480 - 144 + 6 =$$

Answer A
342

#9 $y = (\sec x)^2 + (\tan x)^2$

$$y' = 2(\sec x)' \cdot \sec x \tan x + 2(\tan x)' \cdot \sec^2 x$$

Chain rule

$$= 4 \sec^2 x \tan x \quad \text{Answer D}$$

#10 $D_x \csc \frac{t}{2}$

$$= -\csc u \cot u \cdot du$$

$$= -\csc\left(\frac{t}{2}\right) \cot\left(\frac{t}{2}\right) \cdot \frac{1}{2} =$$

Answer E

None
of these