

FTDW p. 219-220 #1-37, 39-42

2. $2 \cos x - \sec^2 x$ 4. $2x - \sec x \tan x$ 6. $2 - \csc^2 x$
8. $\csc x(1 - x \cot x)$ 10. $-x(x \cos x + 2 \sin x)$ 12. $x \cos x$
14. $\sec x \csc x(\tan x - \cot x) = \sec^2 x - \csc^2 x$ 16. $-\sin x$ 18. $-\csc^2 x$
20. $2 \cos x + \sin x$ 22. $\sec^2 x$ 24. $-(1 + \sin x)^{-1}$
26. a) $\sin x$ b) $\cos x$ 28. *Tangent*: $y = x$ *Normal*: $y = -x$
30. *Tangent*: $y = 2 + \cot 1 - 4.054(x - 1)$
Normal: $y = 2 + \cot 1 - 0.247(x - 1)$
32. *The derivatives never = 0* 34. (π, π) 36. $(\frac{\pi}{2}, \frac{\pi}{2})$
40. $(-\frac{\pi}{4}, -1)$ $(\frac{\pi}{4}, 1)$ 42. $y = 2\sqrt{3} - 3$