

Name _____ Date _____

Product Rule Practice (Including Special Derivatives)

1. Find y' if $y = 5x^2\cos x$

2. Find y' if $y = e^{6x}$

3. Find y' if $y = \cot x \csc x$

4. Find y' if $y = \sin x e^{(4x^2)}$ (This is the product rule more than once!)

5. Find y' if $y = 5e^x \ln x + \sec x \sin x$ (This is two problems in one)

6. Find y' if $y = \ln x \cos x$

7. Find y' if $y = \tan x(4x^3 - 12x^2 + 5x + 4)$