Derivative Examples

1. $\frac{\partial}{\partial t}(t^2 + 2t) = 2t + 2$

2. $\frac{\partial}{\partial t}(t^2.e^{2t}) = 2t.e^{2t} + t^2.2e^{2t}$

3. $\frac{\partial}{\partial t}\left(\frac{t^2}{e^{2t}}\right) = \frac{2t.e^{2t} - t^2.2e^{2t}}{(e^{2t})^2}$

4. $\frac{\partial}{\partial t}\sin(t^2) = 2t.\cos(t^2)$

5. $\frac{\partial}{\partial t}\sin(t^2)^4 = 4.\sin(t^2)^3.2t.\cos(t^2)$

6. $\frac{\partial}{\partial t}\sqrt{t} = \frac{1}{2\sqrt{t}}$

7. $\frac{\partial}{\partial t}e^t = e^t$

8. $\frac{\partial}{\partial t}tan(e^t) = \frac{e^t}{\cos(e^t)^2}$

9. $\frac{\partial}{\partial t}csc(2t) = -2.csc(2t).cot(2t)$

10. $\frac{\partial}{\partial t}sin(2t^3)^{-1} = \frac{6t^2}{\sqrt{1-4t^6}}$

11. $\frac{\partial}{\partial t}\tan(3t)^{-1} = \frac{3}{1+6t^2}$