

1. Find the derivative of $y = 10^{3x}$.
2. Find the derivative of $y = e^{x^2}$.
3. Find the derivative of $y = \sin(e^{3x})$.
4. Find the derivative of $y = e^{\sin x}$.
5. Find the derivative of

$$y = \frac{\ln 2x}{e^{2x} + 2}$$

6. Find the derivative of $y = 10^{x^2}$.
7. Find the derivative of

$$y = \cos 2x(e^{x^2} - 1)$$

8. Find the derivative of

$$y = (2e^{x^2} + x^2)^3$$