

In addition to the problems below, complete Page 143, # 1–11 odd.

Instructions: Find the derivative of each function.

1. $y = 3e^x + \frac{4}{\sqrt[3]{x}}$

2. $k(x) = x^{2.4} + e^{2.4}$

3. $g(t) = \sqrt[4]{t} - 4e^t$

4. $y = e^{x+1} + 1$ (rewrite e^{x+1} using exponent rules)

5. $c(x) = (2x+3)^2 - \frac{\pi}{e^{-x}}$

6. $y = (x+x^{-1})^2 + \frac{3}{e^{-x}}$

7. $f(x) = 3(e^x + x^2)$

8. $h(x) = \frac{5x^4 - xe^x}{x}$

9. Find the equation of the **tangent line** in slope-intercept form to $y = x^4 + 2e^x$ at $(0, 2)$.

10. Find the equation of the **tangent line** in slope-intercept form to $y = 4e^x + (x - 1)^2$ at $x = 0$.