Calculus H
Ch. 3 #13

Name _____

Find the derivative of each of the following functions.

1. $y = \left(x^2 + 4x + 6\right)^5$

2. $f(x) = \left(x^3 - 5x\right)^4$

3. $f(x) = -2x^4 + 5x^2 - 7 - \frac{1}{x^2}$

4. $y = \cos\left(x^3\right)$

5. $y = \cos^3 x$

6. $f(x) = \frac{x^3 - 4x^2 - 7x}{x^2}$

7. $y = \left(2x^2 - 6x + 1\right)^{-8}$

8. $y = \sqrt{x^2 - 7x}$

9. $y = \frac{1}{\left(x^2 - 2x - 5\right)^4}$

10. $f(x) = 6x^5 + 3\sqrt[3]{x^2} + e$

11. $f(x) = \left(x - \frac{1}{x}\right)^{\frac{3}{2}}$

12. $y = \sin^2\left(\cos(4x)\right)$

13. $y = \sin^3(2x + 3)$

14. $f(x) = 4x\left(x^3 - 5x\right)$