

Implicit Differentiation - Key

In problems 1-5, Find dy/dx .

1. $y' = \frac{-y-1}{x}$ or $y' = \frac{-7}{x^2}$	2. $y' = \frac{4x^3}{3y^2}$ or $y' = \frac{4x^3}{3(2+x^4)^{2/3}}$
3. $y' = \frac{5-2xy^3}{3x^2y^2}$ or $y' = \frac{-\sqrt[3]{5}}{3x^{4/3}}$	4. $y' = \frac{6-y}{21y^2+x}$
5. $y' = \frac{2-2x-y}{x-6}$	6. $y' = \frac{-y}{x}$ or $y' = \frac{-4}{x^2}$

In problems 6-10, Find the slope of the graph of the function at the given point.

6. <i>undefined</i>	7. $\frac{-6}{11}$
8. $\frac{-1}{10}$	9. $\frac{-3}{4}$
10. 0	

In problems 11-12, Find the equation(s) of the tangent line at the two given points

11. $y = 2x - 3, y = -2x - 3$	12. $y = 5, y = -16x - 79$
-------------------------------	----------------------------

13. -0.97778

14. $13/3$