CH.2 AB HW 2-2 Power Rule and Notation   Name_____

Find each derivative

1) $f(x)=8x^5$

2) $y=x+7$

3) $f(x)=17x^{10}-15x$

4) $f(x)=\dfrac{x}{37}$

5) $f(x)=7x^{-6}$

6) $f(x)=527$

7) $y=\dfrac{9}{x^2}$

8) $f(x)=\dfrac{11}{x}$

9) $f(x)=3\sin x-2\cos x$

10) $f(x)=(4x+1)^2$

11) $y=\dfrac{7x^2+3x}{x}$

12) $g(x)=\pi\tan x+8\sec x$

13) $y=x^{4/3}+21x^{5/7}$

14) $h(s)=s^{11/7}-s$

15) $f(x)=x^{-2/5}$

Find the slope and equation of the tangent line at the given point

16) $f(x) = x^4 - 3x^2 + 2$; $(2,6)$

17) $y = \sin x$; $(\pi, 0)$

18) $g(x) = \dfrac{2}{\sqrt[4]{x^3}}$; $x = 1$

Determine the point(s) if any at which the graph of the function has a horizontal tangent line

19) $f(x) = x^4 - 2x^2 + 3$

20) $y = x^3 + x$

Find k such that the line is tangent to the graph of the function

Function	Line
21) $f(x) = x^2 - kx$	$y = 5x - 4$