MR19 **HPC B**

NAME _____ DATE _____ PER _____ SCORE _____

Derivatives

Derivatives: *Differentiate*.

1) $y = \dfrac{1}{2\sin 2x}$

2) $y = \sec^2 \sqrt{x}$

3) $xy + y = 3$

4) $x + \cos(x + y) = 0$

5) $y = \dfrac{2 - x}{3x + 1}$

6) $y = \sqrt{x^2 + 2x - 1}$

Tangent Lines: *Find the equation of the tangent line at the given point on the curve.*

7) $x^2 + y^2 = 25$ at $(3,4)$

8) $x + \sqrt{xy} = 6$ at $(4,1)$

More on Derivatives: *Use the table for 9-12 to answer the questions.*

x	f	f'	g	g'
0	2	1	5	-4
1	3	2	3	-3
2	5	3	1	-2
3	10	4	0	-1

9) If $A = f + 2g$, then $A'(3)$ is _____

10) If $B = f \cdot g$, then $B'(2)$ is _____

11) If $D = \dfrac{1}{g}$, then $D'(1)$ is _____

12) If $H(x) = \sqrt{f(x)}$, then $H'(3)$ is _____