Sheet #491: ANTIDERIVATIVES

NAME: _____

Period: _____

1.

a, $\frac{d}{dx}(\ln(x)) =$

b, $\frac{d}{dx}\left(\frac{1}{x}\right) =$

2. IF $f(x) = F'(x)$, FIND ALL ANTIDERIVATIVES, $F(x)+C$, IF

a, $f(x) = 0$

b, $f(x) = 3$

c, $f(x) = x^2$

d, $f(x) = 5x^4$

e, $f(x) = \cos x$

f, $f(x) = \frac{1}{x}$

g, $f(x) = \ln(x)$

h, $f(x) = \frac{1}{x^2}$

i, $f(x) = \sec^2 x$

j, $f(x) = \sin(2x)$

k, $f(x) = 6(x+3)^5$

l, $f(x) = (2x+7)^5$

m, $f(x) = e^{\sin x} \cdot \cos(x)$

3. FIND THE GENERAL SOLUTION, $y(x)$.

$$\frac{dy}{dx} = \frac{x^3}{3}$$

4. FIND THE PARTICULAR SOLUTION, $y(t)$, IF $y(0) = 5$

$$\frac{dy}{dt} = t^2 + t + 1$$

5. FIND THE POSITION FUNCTION, $s(t)$, IF $s(0) = 1$, $v(0) = 2$.

$$a = 5 \text{ ft/sec}^2.$$