

Find the derivative or antiderivative as indicated. Put your answers on the lines provided.

(a)  $\int \csc^2 x \, dx =$  \_\_\_\_\_

(b)  $\int x^{1/2} \, dx =$  \_\_\_\_\_

(c)  $\frac{d}{dx}(2^x) =$  \_\_\_\_\_

(d)  $\frac{d}{dx}(\arctan x) =$  \_\_\_\_\_

(e)  $\int \frac{1}{x\sqrt{x^2-1}} \, dx =$  \_\_\_\_\_

(f)  $\int e^x \, dx =$  \_\_\_\_\_

(g)  $\frac{d}{dx}(x^{-5}) =$  \_\_\_\_\_

(h)  $\frac{d}{dx}(\csc x) =$  \_\_\_\_\_

(i)  $\int \sin x \, dx =$  \_\_\_\_\_

(j)  $\int \frac{1}{\sqrt{1-x^2}} \, dx =$  \_\_\_\_\_

(k)  $\frac{d}{dx}(\tan x) =$  \_\_\_\_\_

(l)  $\frac{d}{dx}(4) =$  \_\_\_\_\_

(m)  $\int \frac{1}{x} \, dx =$  \_\_\_\_\_

(n)  $\int \sec x \tan x \, dx =$  \_\_\_\_\_