

Show work to the side if needed. Place final answer in the blank provided.

\_\_\_\_\_ 1.  $\int \frac{5}{12+8x^2} dx$

\_\_\_\_\_ 2.  $\int x(3x-4)^{12} dx$

\_\_\_\_\_ 3.  $\int \frac{5}{\sqrt{8-4x^2}} dx$

\_\_\_\_\_ 4.  $\int \cot^7 x \csc^2 x dx$

\_\_\_\_\_ 5.  $\int \frac{e^{\sqrt{x}}}{\sqrt{x}} dx$

\_\_\_\_\_ 6.  $\int \frac{3\sec x \tan x}{7-2\sec x} dx$

\_\_\_\_\_ 7.  $\int \frac{7x}{5+x^2} dx$

\_\_\_\_\_ 8.  $\int \frac{x^2+1}{x-3} dx$

\_\_\_\_\_ 9.  $\int x \cos x dx$

\_\_\_\_\_ 10.  $\int \frac{x^2-x+2}{\sqrt[3]{x}} dx$

\_\_\_\_\_ 11.  $\int 3^{7x} dx$

BONUS

$$\int x^3 \sin x \, dx$$