

Worksheet 5.5

Full Name: _____ Score: _____

1. Compute each of the following integrals.

(a) $\int \sin(2x) dx$

(b) $\int 8 \csc(4x) \cot(4x) dx$

(c) $\int \frac{4}{2x-1} dx$

(d) $\int \frac{15}{\cos^2(5x)} dx$

(e) $\int 3(5x - 2)^3 dx$

(f) $\int \frac{(2e^x - 3)^2}{e^{2x}} dx$

(g) $\int_0^{\frac{\sqrt{3}}{2}} \frac{3}{1 + (2x)^2} dx$

(h) $\int_0^5 \frac{1}{\sqrt{3x + 1}} dx$

(i) $\int 2x(1+x^2)^5 dx$

(j) $\int 12x^3 e^{x^4} dx$

(k) $\int e^x \cos(e^x) dx$

(l) $\int \cos^5 x \sin x dx$

(m) $\int 24x^2 \sec(2x^3) \tan(2x^3) dx$

(n) $\int \cot x dx$

(o) $\int \frac{(\ln x)^3}{x} dx$

(p) $\int \frac{\sin^{-1} x}{\sqrt{1-x^2}} dx$

$$(q) \int e^{\tan t} \sec^2 t \, dt$$

$$(r) \int (12x - 10)\sqrt{3x^2 - 5x} \, dx$$

$$(s) \int \frac{x^3}{1+x^4} \, dx$$

$$(t) \int \frac{e^{\sqrt{x}}}{\sqrt{x}} \, dx$$