

Name: _____

Directions: Show all work. No credit for answers without work.

1. [4 points] Evaluate the following.

(a) $\int 8 dx$

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

(b) $\int y^5 + y^2 dy$

(f) $\int \sqrt{x} dx$

(c) $\int 6s^3 ds$

(g) $\int x^e + \ln(2) dx$

(d) $\int \frac{1}{r} dr$

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

2. [2 parts, 1 point each] Types of integrals.

(a) Identify the type of the above integrals as either definite integrals or indefinite integrals.

(b) Describe two differences between definite integrals and indefinite integrals.

3. [2 parts, 2 points each] Evaluate the following. Show your work.

(a) $\int 2x(x^2 + 5)^{11} dx$

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