

1. For each integral write what method you would use to evaluate the integral (by parts or substitution) and label the components. Then evaluate parts a and d.

(a)  $\int \frac{6x}{e^{3x}} dx$

(b)  $\int \frac{x}{(x+5)^3} dx$

(c)  $\int x^5 \ln(x) dx$

(d)  $\int_0^\pi \cos(x) \sqrt{\sin(x)} dx$

(e)  $\int \frac{\sec^2}{(1+\tan(x))^3} dx$

(f)  $\int \sqrt{4x-5} dx$

Reading quiz:

2. Using the integral formula at the back of the textbook identify which formula you would use to evaluate the integrals below:

(a)  $\int \sin(2x) \cos(4x) dx$

(b)  $\int x^8 \ln(x) dx$

(c)  $\int (x^5 - 4x^2 + 3x + 1)e^{-3x} dx$

(d)  $\int \frac{1}{x^2+4x+9} dx$

(e)  $\int \frac{1}{x^2-3x+2} dx$