

Integration by Parts

Evaluate each of the given integrals.

1. $\int_2^0 (6-x)e^{4-2x} dx$

2. $\int (w^2 - 6w) \sin(2w) dw$

3. $\int 2 \tan^{-1}\left(\frac{z}{4}\right) dz$

4. $\int_0^1 e^{\frac{y}{2}} \cos(4y) dy$

5. $\int 3x^7 \cos(2-x^4) dx$

Integrals Involving Trig Functions

For problems 6 – 8 evaluate the given integral.

6. $\int \sin^6\left(\frac{t}{3}\right) \cos^5\left(\frac{t}{3}\right) dt$

7. $\int \cos^4 x dx$

8. $\int \tan^3(4z) \sec^7(4z) dz$

For problems 9 & 10 evaluate the given integral. Note that even though I didn't do any problems like these in class you DO have the knowledge to do them.

9. $\int \frac{1 - \sin^3(2t)}{\cos^2(2t)} dt$

10. $\int \csc^6(x) dx$