

## Math 11B Discussion Section

Evaluate each of the following integrals.

$$(1) \int (8x - 12)(4x^2 - 12x)^4 dx$$

$$(2) \int \frac{4w+3}{4w^2+6w-1} dw$$

$$(3) \int 5(z-4)\sqrt[3]{z^2-8z} dz$$

(4) With your group recall (or lookup) and write down the derivatives for the trigonometric functions (e.g.  $\csc$ ) and the inverse trigonometric functions (e.g.  $\tan^{-1}$ ).

Evaluate each of the following integrals using what we know about the derivatives of the trigonometric functions.

$$(5) \int 90x^2 \sin(2+6x^3) dx$$

$$(6) \int \frac{\csc(x)\cot(x)}{2-\csc(x)} dx$$

$$(7) \int \frac{3}{1+9x^2} dx$$

Evaluate the following integrals.

$$(8) \int_{\pi}^0 \sin(z) \cos^3(z) dz$$

$$(9) \int_{-1}^2 x^3 + e^{\frac{1}{4}x} dx$$

