

Math 2215 - Calculus 1
Quiz #16 - 2007.04.16
Solutions

Compute the following definite integrals:

1.

$$\int_0^2 4x^3 - 2x + 1 dx$$

$$\int_0^2 4x^3 - 2x + 1 dx = x^4 - x^2 + x \Big|_0^2 = 14.$$

2.

$$\int_0^{\frac{\pi}{4}} \sin(2\theta) d\theta$$

$$\int_0^{\frac{\pi}{4}} \sin(2\theta) d\theta = -\frac{1}{2} \cos(2\theta) \Big|_0^{\frac{\pi}{4}} = \frac{1}{2}$$

3.

$$\int_0^{\ln(4)} e^{2t} dt$$

$$\int_0^{\ln(4)} e^{2t} dt = \frac{1}{2} e^{2t} \Big|_0^{\ln(4)} = 8 - \frac{1}{2} = \frac{15}{2}$$