Math 106   Quiz #6   March 5, 2018

• This is a closed-book quiz. No books, notes, calculators, cell phones, communication devices of any sort, or webpages, or other aids are permitted.

1. [20 points] Evaluate each of the following definite integrals.

(a) $\displaystyle\int_{-1}^{2} x^2 - 3x \ dx$

(b) $\displaystyle\int_{-7}^{7} 7 \ dx$

(c) $\displaystyle\int_{-2}^{2} 2x \ dx$

1. (continued) Evaluate each of the following definite integrals.

(d) $\displaystyle\int_0^4 (4-x)\sqrt{x}\ dx$

(e) $\displaystyle\int_0^1 (x+2)(x-3)\ dx$

(f) $\displaystyle\int_1^4 \frac{1+x}{\sqrt{x}}\ dx$

(g) $\displaystyle\int_{\frac{\pi}{6}}^{\pi} \sin\theta\ d\theta$

1. (continued) Evaluate each of the following definite integrals.

(h) $\int_{\frac{\pi}{6}}^{\frac{\pi}{3}} \cos x \ dx$

(i) $\int_{0}^{\frac{\pi}{3}} \sec x \tan x + \sec^2 x \ dx$

(j) $\int_{1}^{2} \frac{(1+x)^2}{x^4} \ dx$