

(5.4) Indefinite Integrals & Net Change Theorem

Name: _____

1. Compute each of the following indefinite integrals

(a) $\frac{2}{3}x^{3/2} - \frac{1}{2}x^4 + x^3 + C$

(b) $2 \ln |x| - 4x^{-2} + C$

(c) $\frac{3}{2}x^{2/3} + \frac{6}{5}x^{5/3} + \frac{3}{11}x^{11/3} + C$

(d) $\frac{1}{4}v^4 + \frac{2}{3}v^3 - \frac{1}{2}v^2 - 2v + C$

(e) $20 \ln |x| - 60x^{-1} - \frac{45}{2}x^{-2} + C$

(f) $\sec \theta + C$

(g) $\sin \theta + C$

2. Compute each of the following definite integrals

(a) $\frac{\pi}{4}$

(b) $\frac{\pi}{6}$

(c) $-6 + e + \ln 5$

(d) $\frac{69}{4}$