

Answers to Week in Review #1

Section 5.5

1.

(a) $\frac{1}{8}$

(b) $\sin(\ln(x)) + C$

(c) $\frac{1}{2}(1 - e^{-1})$

(d) $\frac{\pi}{12}$

(e) $\frac{1}{5}(x^2 + 1)^{5/2} - \frac{1}{3}(x^2 + 1)^{3/2} + C$

Section 6.1

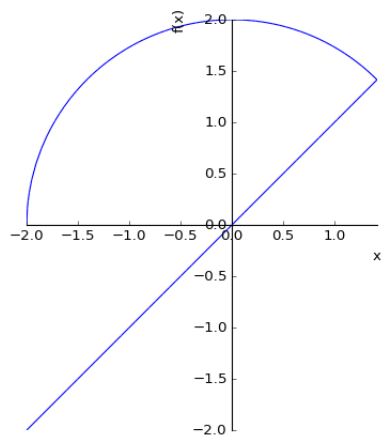
1. $\frac{32}{3}$

2. $\frac{71}{6}$

3. $4\pi - \sqrt{3}$

4. 36

5. $e - 1$



6.

Section 6.2

1. $\frac{\pi^2}{2}$

2. $\int_{1/2}^1 (\pi(3x)^2 - \pi(2x^2 + 1)^2) dx$

3. $\frac{32\pi}{5}$

4. $\frac{40\pi}{3}$

5. $\frac{1}{3}s^2h$

6. $\frac{4\sqrt{3}}{3}$