Exercises 7.7, page 520

8. (a) 0.1222579989 (b) 0.1224176045

24. $n \geq 19$

32. 84.27 m^2

Exercises 7.8, page 531

2. (a) proper (b) improper (c) improper (d) improper

6. divergent

12. divergent

14. divergent

16. divergent

18. divergent

38. divergent

40. -4

52. divergent

54. convergent

56. $\pi/4$

58. $(p-1)^{-1}$ for $p > 1$

Exercises 8.1, page 546

8. $6 + \dfrac{1}{4}\ln 2$

10. 12

14. $2 - \sqrt{2} - \dfrac{1}{2}\ln 3 + \ln(\sqrt{2}+1)$

32. (b) $\frac{1}{27}(13\sqrt{13}-8)$ (c) $\frac{1}{27}(80\sqrt{10}+13\sqrt{13}-16)$

36. $10\ln(3+\sqrt{13})-10\ln(\sqrt{29}-5)+\frac{25}{2}\sqrt{29}+\frac{15}{2}\sqrt{13}$ ft

Exercises 8.2, page 552

6. $\frac{8\pi}{3}(10\sqrt{10}-2\sqrt{2})$

8. $\pi\left(\frac{315}{16}-8\ln 2-(\ln 2)^2\right)$

14. $\pi\left(\frac{65}{24}\sqrt{65}-\frac{17}{24}\sqrt{17}\right)$

16. $\pi\left(\frac{5}{6}\sqrt{5}-\frac{1}{6}\right)$

18. 2π

30. $\pi\left(\frac{205}{24}\sqrt{41}-\frac{625}{24}\right)$ ft^2

32. $4Rr\pi^2$