

Fall 2005 Math 151
Solutions to Week in Review 10

1. $\frac{61}{20}$
2. a.) $\sum_{i=3}^7 \sqrt{i}$
b.) $\sum_{i=1}^5 \frac{1}{i^2}$
3. a.) the norm of the partition is 0.5
c.) The sum of the areas of the approximating rectangles is $\frac{275}{64}$
4. a.) norm=1
c.) Sum is 35
5. a.) norm: $\frac{\pi}{2}$
c.) Sum is $\frac{\sqrt{2}\pi}{8} + \frac{\pi}{2}$
6. $M_n \approx 2.562099372$
7. $\frac{1}{2}$
8. $\int_0^6 f(x) dx$
9. $\int_1^3 (3x^5 - 6) dx$
10. $2 \leq \int_0^2 \sqrt{x^3 + 1} dx \leq 6$
11. $\cos(x)\sqrt{1 + (\sin(x))^2}$
12. a.) $-\frac{11}{3}$
b.) $\frac{11}{6}$
c.) $\frac{29}{6}$
d.) 3
e.) $\ln \frac{4}{9}$
f.) -5
13. a.) $4/3\sqrt{x^3 + 1} + C$
b.) $1/2 \ln(x^2 + 1) + C$
c.) $1/2(e^4 - 1)$
d.) $-1/2 \sin(2 - x^2) + C$

e.) $\ln(1.5)$

f.) $\ln|x + 1| + \frac{1}{x + 1} + C$

14. 5