Week of Feb 24

1 6.1

- 17: Find the area bounded by the graphs of $y = x^2 - 20$ and $y = 0$ over the interval $-3 \leq x \leq 0$.

- 27: Find the area bounded by the graphs of $y = 1/x$ and $y = 0$ over the interval $1 \leq x \leq e$.

- 57: Find the area bounded by the graphs of $y = e^{0.5x}$ and $y = -1/x$ over the interval $1 \leq x \leq 2$.

- 65: Find the area bounded by the graphs of e^x and $y = e^{-x}$ over the interval $1 \leq x \leq 2$.

2 6.3

- 11: Compute the following integral

$$\int x^2 \ln(x)\, dx.$$

- 19: Compute the following integral

$$\int_0^1 (x-3)e^x \, dx.$$

- 27: Compute the following integral

$$\int \sqrt{x}\ln(x)\,dx.$$

- 41: Compute the following integral

$$\int_1^e \frac{\ln(x)}{x^2}\, dx.$$

- 57: Compute the following integral

$$\int_0^1 \ln(e^{x^2})\, dx.$$

3 6.4

- 9: Compute the following integral

$$\int \frac{1}{x(1+x)}\,dx.$$

- 17: Compute the following integral

$$\int \frac{1}{x\sqrt{x^2+4}}\,dx.$$

- 23: Compute the following integral

$$\int_1^3 \frac{x^2}{3+x}\,dx.$$

- 43: Compute the following integral

$$\int \frac{1}{x^3\sqrt{4-x^4}}\,dx.$$

- 61: Compute the following integral

$$\int \frac{x}{\sqrt{x^2-1}}\,dx.$$