Math 1b. More about Areas

Spring 2006

1. Find the area bounded by

$$
\begin{aligned}
x &= 0 \\
x &= 2 \\
y &= \frac{1}{x+1} \\
y &= \sqrt{x+2}
\end{aligned}
$$

2. Find the area bounded by

$$
\begin{aligned}
y &= x \\
y &= x^2
\end{aligned}
$$

3. Find the area bounded by

$$
\begin{aligned}
x &= y^2 - 4y \\
x &= 2y - y^2
\end{aligned}
$$

4. A cross-section of an airplane wing has length 200 cm. Measurements of the thickness of the wing, in centimeters, at 20-centimeter intervals are 5.8, 20.3, 26.7, 29.0, 27.6, 27.3, 23.8, 20.5, 15.1, 8.7, and 2.8. Use Simpson's Rule to estimate the are of the wing's cross-section.

5. Find the area bounded by

$$\begin{aligned} y &= |x| \\ y &= x^2 - 2 \end{aligned}$$

6. Find the area bounded by

$$\begin{aligned} y &= 1/x \\ y &= x \\ y &= x/4 \end{aligned}$$