Homework #4

7.8 #11, 14, 28, 39, 49

Hint for #39: integrate by parts.
Hint for #49: split up the integral into two integrals, the first from 0 to 1, the second from 1 to ∞.

The following limit may be useful for some of these problems:

$$\lim_{(\text{blah}) \to -\infty} e^{(\text{blah})} = 0.$$

Here (blah) stands for any quantity that tends to $-\infty$, e.g. a variable like x or a function like $\frac{1}{x^2}$.

8.1 #9, 14

9.1 #1

9.3 #4, 14