Here are the indefinite integrals that you need for the Chapter 4 homework problems. To use these, you will have to make a change of variables in the integrals from the homework problems.

\[
\int y^a \, dy = \frac{1}{a+1} y^{a+1} \quad a \geq 0
\]

\[
\int \frac{1}{y^a} \, dy = \frac{-1}{(a-1)y^{a-1}} \quad a > 0, a \neq 1
\]

\[
\int ye^{-\frac{y^2}{2}} \, dy = -e^{-\frac{y^2}{2}} \quad y \geq 0
\]