

## เฉลยแบบฝึกหัด 9.3

1.  $\int x e^{-x} dx = -\frac{x}{e^x} - \frac{1}{e^x} + c$
2.  $\int \ln^2 x dx = x(\ln^2 x - 2 \ln x + 2) + c$
3.  $\int r e^{\frac{r}{2}} dr = 2r e^{\frac{r}{2}} - 4e^{\frac{r}{2}} + c$
4.  $\int_1^2 \frac{\ln x}{x^2} dx = \frac{1}{2} - \frac{1}{2} \ln(2)$
5.  $\int \ln(2x + 1) dx = x \ln(2x + 1) + \frac{1}{2} \ln(2x + 1) - x - \frac{1}{2} + c$
6.  $\int_0^1 \frac{y}{e^{2y}} dy = \frac{1}{4} - \frac{3}{4} e^{-2}$
7.  $\int x 5^x dx = \frac{5^x (x \ln 5 - 1)}{\ln^2 5} + c$
8.  $\int x^4 \ln^2 x dx = \frac{1}{125} x^5 (25 \ln^2 x - 10 \ln x + 2) + c$