Practice with these integrals, in test conditions. Answers, with hints, are on the course web page.

1. $\displaystyle\int \left(4\sin(4v) + \frac{2}{v^2} + \frac{5}{\sqrt{1-v^2}}\right) dv.$
2. $\displaystyle\int_2^e \left(\frac{9w^3 - 5}{w}\right) dw.$
3. $\displaystyle\int \sin(3y) e^{6\cos(3y)}\, dy.$
4. $\displaystyle\int \left(4e^{6z} + \frac{3}{z^3} + \frac{5}{1+z^2}\right) dz.$
5. $\displaystyle\int_1^4 \frac{v}{5v^2 - 4}\, dv.$
6. $\displaystyle\int 7\arctan(8w)\, dw.$
7. $\displaystyle\int \frac{-2x + 3}{x^2 + 3x - 4}\, dx.$
8. $\displaystyle\int 6\arcsin(4t)\, dt.$
9. $\displaystyle\int \frac{14z - 5}{z^2 + 4z + 20}\, dz.$
10. $\displaystyle\int_1^2 \left(\frac{3x^5 - 1}{x^2}\right) dx.$
11. $\displaystyle\int \frac{-6y + 2}{y^2 - 2y}\, dy.$
12. $\displaystyle\int \frac{18u + 6}{u^2 - 4u + 29}\, du.$
13. $\displaystyle\int \frac{\cos(2\sqrt{y})}{\sqrt{y}}\, dy.$