INTEGRATION PRACTICE

Evaluate the integrals below. Your answers should be reasonably simplified.

1. $\displaystyle\int_0^{\pi/4} \sin^2(2\theta)\, dx$

2. $\displaystyle\int x^3\sqrt{x^2+1}\, dx$

3. $\displaystyle\int_2^6 t^5\ln(t)\, dt$

4. $\displaystyle\int_2^3 \frac{2x+3}{(x-1)(x+4)}\, dx$

5. $\int \sec(x)\, dx$

6. $\int \dfrac{\ln(\ln(x))}{x \ln(x)}\, dx$

7. $\int \sin^6(x) \cos^3(x)\, dx$

8. $\int x \sin(7x)\, dx$