1. (improper:cauchym)
   Compute $\int_{-\infty}^{0} \frac{x}{1+x^2}dx$ and $\int_{0}^{\infty} \frac{x}{1+x^2}dx$. What does this say about $\int_{-\infty}^{\infty} \frac{xdx}{1+x^2}$?

2. (improper:ln)
   Compute $\int_{0}^{1} \ln(t)dt$.

3. (improper:pf1)
   Compute $\int_{10}^{\infty} \frac{dx}{x^2-4}$

4. (improper:pf2)
   Show that $\int_{1}^{\infty} \frac{dx}{x^2-4}$ is not a finite number. What answer do you get if you forget that the integrand has an asymptote at 2 and fail to split the integral up there?

5. (improper:pf3)
   Compute $\int_{1}^{\infty} \frac{dx}{1+e^{2x}}$

6. (improper:pf4)
   Compute $\int_{10}^{\infty} \frac{dx}{x^2-9}$.

7. (improper:trig1)
   Compute $\int_{1}^{2} \frac{dt}{t\sqrt{t^2-1}}$.

8. (improper:trig2)
   Compute $\int_{1}^{2} \frac{dt}{\sqrt{4-t^2}}$.

9. (improper:trig3)
   Compute $\int_{1}^{3} \frac{dt}{\sqrt{9-t^2}}$.

10. (improper:partial1)
    Compute $\int_{1}^{\infty} \frac{3}{x^2+3x}dx$.

11. (improper:exp)
    Find $\int_{0}^{\infty} \frac{1}{e^t-1}dt$.