Problems on improper integrals

For each of the following, give an argument to determine if the improper integral is convergent or divergent. If possible, compute the value of each convergent improper integral.

1. $\displaystyle\int_0^\infty \frac{1}{x+3}\,dx$
2. $\displaystyle\int_{-2}^\infty \frac{1}{x^4+3}\,dx$
3. $\displaystyle\int_1^\infty \frac{\ln x}{x}\,dx$
4. $\displaystyle\int_1^\infty \frac{\ln x}{x^2}\,dx$
5. $\displaystyle\int_0^\infty xe^{-x^2}\,dx$
6. $\displaystyle\int_0^\infty e^{-x^2}\,dx$
7. $\displaystyle\int_1^\infty \frac{\sin x}{x}\,dx$
8. $\displaystyle\int_0^2 \frac{4}{x^{3/2}}\,dx$
9. $\displaystyle\int_0^3 \frac{1}{x^{1/3}}\,dx$
10. $\displaystyle\int_{-1}^x \frac{1}{x}\,dx$
11. $\displaystyle\int_{-1}^0 \frac{1}{\sqrt{-x}}\,dx$
12. $\displaystyle\int_2^4 \frac{1}{\sqrt{x-2}}\,dx$