Calculus

Improper Integral Battles (type 1 vs. type 2)

(Q1.) (a) $\int_1^{\infty} \frac{1}{2x-1}\,dx$ vs. (b) $\int_{\frac{1}{2}}^{1} \frac{1}{2x-1}\,dx$

(Q2.) (a) $\int_2^{\infty} \frac{1}{x^2+x-2}\,dx$ vs. (b) $\int_1^{2} \frac{1}{x^2+x-2}\,dx$

(Q3.) (a) $\int_2^{\infty} \frac{1}{\sqrt{x^2-1}}\,dx$ vs. (b) $\int_1^{2} \frac{1}{\sqrt{x^2-1}}\,dx$

(Q4.) (a) $\int_2^{\infty} \frac{1}{x\sqrt{x^3-1}}\,dx$ vs. (b) $\int_1^{2} \frac{1}{x\sqrt{x^3-1}}\,dx$

(Q5.) (a) $\int_0^{\infty} \tan x\,dx$ vs. (b) $\int_0^{\frac{\pi}{2}} \tan x\,dx$