MATH 122

IMPROPER INTEGRALS

GOALS

- ☐ IDENTIFY TWO TYPES OF IMPROPER INTEGRALS
- ☐ REWRITE IMPROPER INTEGRALS AS LIMITS

TWO TYPES:

①

②

ex: $\int_1^{\infty} \frac{1}{x^2}\, dx$

Ex: $\int_1^\infty \frac{1}{x}\,dx$

Ex: $\int_{-\infty}^{\infty} \frac{1}{x^2+1}\,dx$

Ex: $\int_0^\infty x e^{-x}\,dx$

Ex: REVOLVE REGION ENCLOSED BY $y = 1/x$, $y = 0$, $x = 1$ ABOUT X-AXIS.

Ex: $\int_0^4 \frac{1}{\sqrt{x}}\, dx$