

# Confirming an Integral Converges

Session 92

$$\int_1^{\infty} \frac{du}{(5u+2)^2} = \int_1^{\infty} f(u) du \quad f(u) \sim \frac{1}{25u^2}$$

$$\int_1^{\infty} \frac{du}{25u^2} = -\frac{1}{25u} \Big|_1^{\infty} = 0 - \left(-\frac{1}{25}\right) = \frac{1}{25} \Rightarrow \int_1^{\infty} f(u) du \text{ converges}$$