Warm Up. SEND SOLVE ON STATE OF THE J XV3 dx CV5 or DV5? solini Ciminat comput Sol  $\int_{-\infty}^{\infty} \frac{1}{x^{1/3}} dx = \int_{-\infty}^{\infty} \frac{1}{x^{1/3}} dx =$ Glim  $\left[\int_{8}^{+} \frac{1}{x^{\sqrt{3}}} dx\right] = \lim_{4 \to \infty} \left[\frac{3}{2} \frac{2}{3}\right]_{8}^{2/3} = 1$ G  $\lim_{t\to\infty} \left[ \frac{3}{2} t^{2/3} - \frac{3}{2} (8)^{2/3} \right] = \infty$ , so the integral DVS.

Don't forget to write on Exam! 7 continued Trant Rus 16 = 1 " Lasnie x than 7.7 continued Important integrals: [ + wobnet] 1) Sit dx DVS if p<1, eg, Sit vadx, Six dx, Six dx CVS if p>1, eq, 5 x3 dx, 5 x5 dx 2) 5 todx DVS if p 21, eg, 5 to dx, 5 todx

a>0

V5 CVS if pal, eg, 5' todx, 50 x v3 dx