

Homework 10 Final Answers

Section 7.8

7. ∞ Diverges

8. $\frac{1}{36}$ Converges

9. $\frac{1}{5e^{10}}$ Converges

17. $\ln 2$ Converges *Need L'H Rule or Algebra Finish*

20. $\frac{7}{9e^6}$ Converges. *Needs L'H Rule Finish*

21. ∞ Diverges

22. 1 Converges *Needs L'H Rule Finish.*

24. 1 Converges

27. ∞ Diverges

31. **Diverges** because one piece of split Diverges $\int_0^3 \frac{1}{x^4} dx = \infty$ Diverge

37. $-\frac{1}{4}$ Converges *Needs L'H Rule Finish*

Plus Q: $\int_{-\infty}^5 \frac{1}{x^2-4x+7} dx = \frac{5\pi}{6\sqrt{3}}$ Converges

Plus Q: $\int_{-\infty}^{\infty} \frac{1}{4x^2+4x+5} dx = \frac{\pi}{4}$ Converges *Both Split Pieces Converge to $\frac{\pi}{8}$ Add Them.*