

HW #18 Final Answers

Fill All Details and
ASET Justification

1. $\frac{1}{e} \approx \frac{1}{3}$

Max Error = $\frac{1}{24}$

2. $\frac{1}{e} \approx \frac{3}{8}$

Max Error = $\frac{1}{120}$

3. $\frac{1}{e} \approx \frac{11}{30}$

Max Error = $\frac{1}{720}$

4. $\sin 1 \approx \frac{101}{120}$

Max Error = $\frac{1}{5040}$

5. $e^{-\frac{1}{3}} \approx \frac{13}{18}$

Max Error = $\frac{1}{162}$

6. $\arctan\left(\frac{1}{2}\right) \approx \frac{11}{24}$

Max Error = $\frac{1}{160}$

7. Integral $\approx \frac{11}{80}$

Max Error = $\frac{1}{33}$

8. Integral $\approx \frac{11}{48}$

Max Error = $\frac{1}{1440}$

9. $I = \left\{\frac{7}{3}\right\}$
 $R = 0$

10. $I = \left[-\frac{6}{5}, 2\right]$
 $R = \frac{8}{5}$

11. $I = (-\infty, \infty)$
 $R = \infty$

