e w.r.t change in γ, with fixed $\tilde{g} = 0$

Legend:
- Num. Integ., [Eq. (4)]
- Approx. (Lin. $\tilde{g}$) - $\mathcal{O}(\gamma)$, [Eq. (22)]
- Approx. (SP Coeff.) - $O(\gamma^2)$, [Eq. (25),(30)]