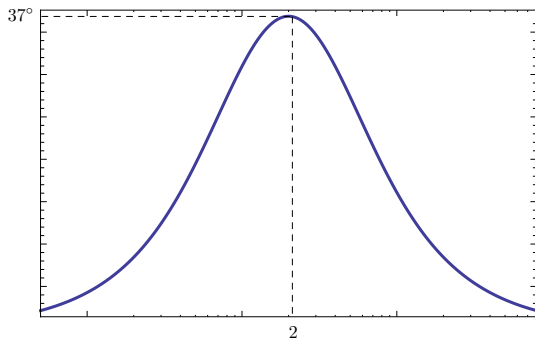


Lead & Lag Compensation

Need at least 40° phase lead, while satisfying

$$\sqrt{z_{\text{lead}} \cdot p_{\text{lead}}} \approx 2 \implies z_{\text{lead}} \cdot p_{\text{lead}} = 4$$

Let's try $z_{\text{lead}} = 1$ and $p_{\text{lead}} = 4$ $D(s) = \frac{s+1}{\frac{s}{4}+1}$



Phase lead = 37° — not enough!!