UFPR
UNIVERSIDADE FEDERAL DO PARANÁ

Controle e Servomecanismo

TE240

Projetos de controladores: avanço de fase

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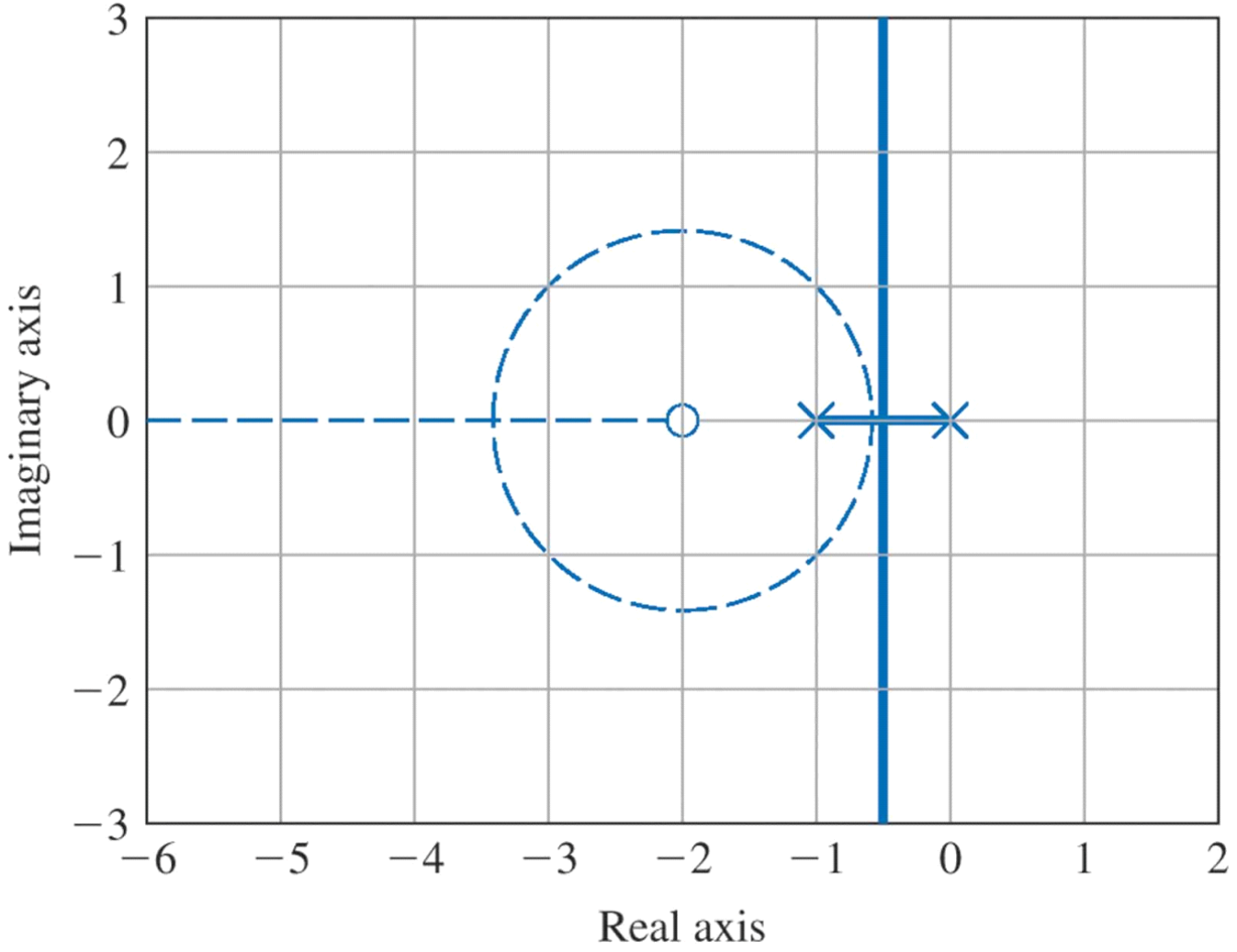
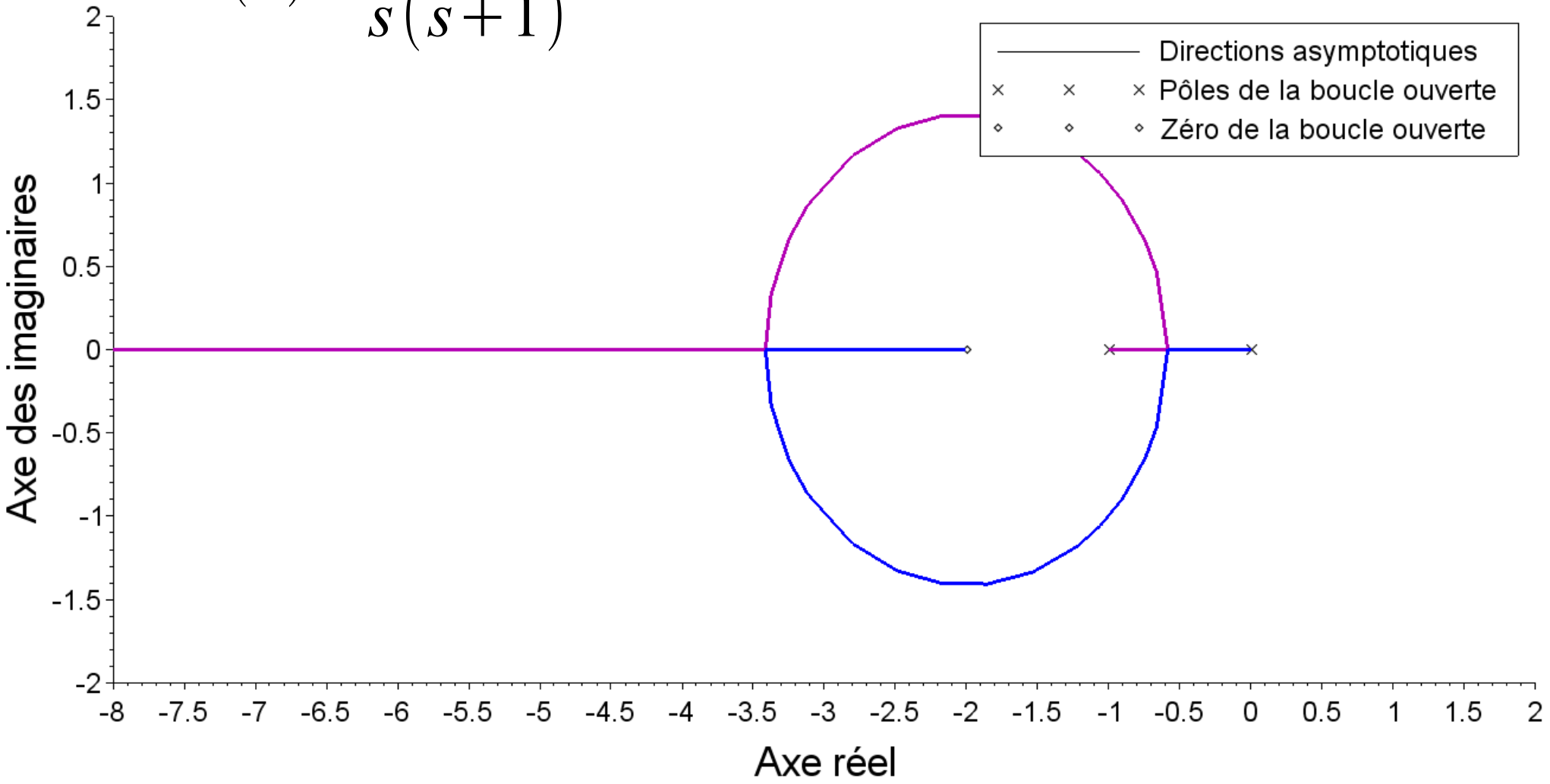
Controlador avanço de fase

Figure 5.22 Root loci for $1 + D(s)G(s) = 0$, $G(s) = \frac{1}{s(s+1)}$: with compensation $D(s) = K$ (solid lines) and with $D(s) = K(s + 2)$ (dashed lines)

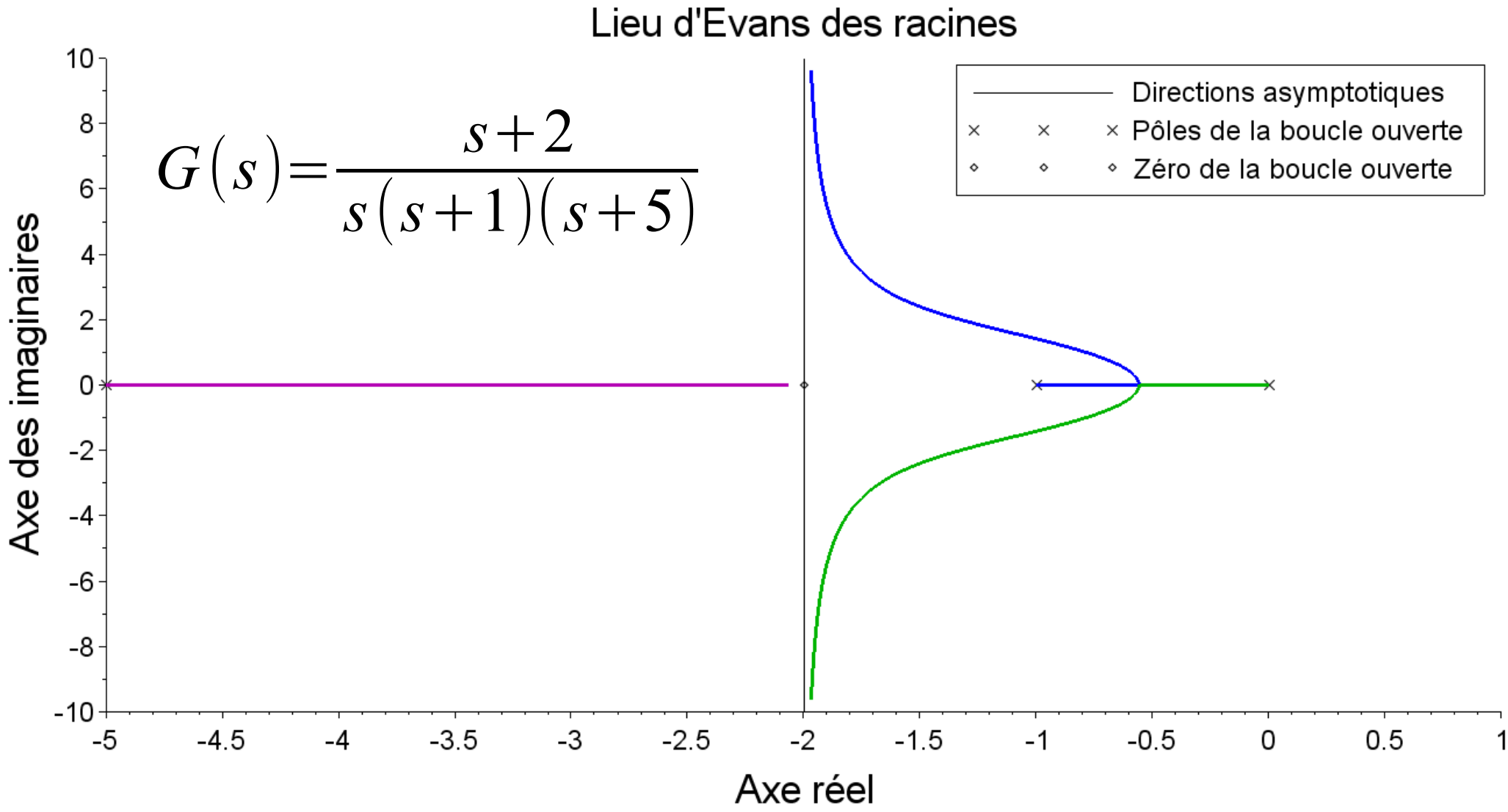


Controlador avanço de fase

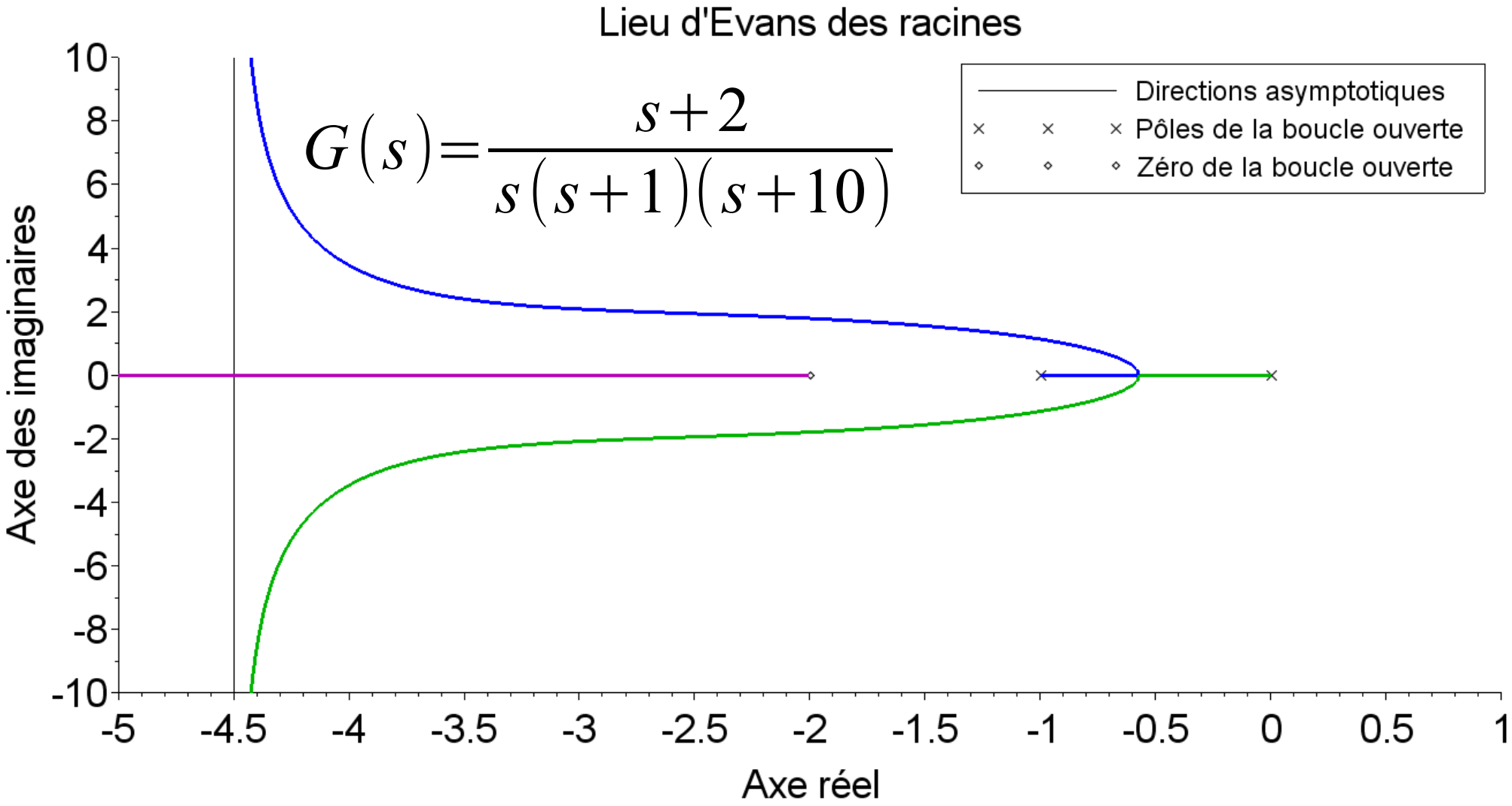
$$G(s)=\frac{s+2}{s(s+1)}$$



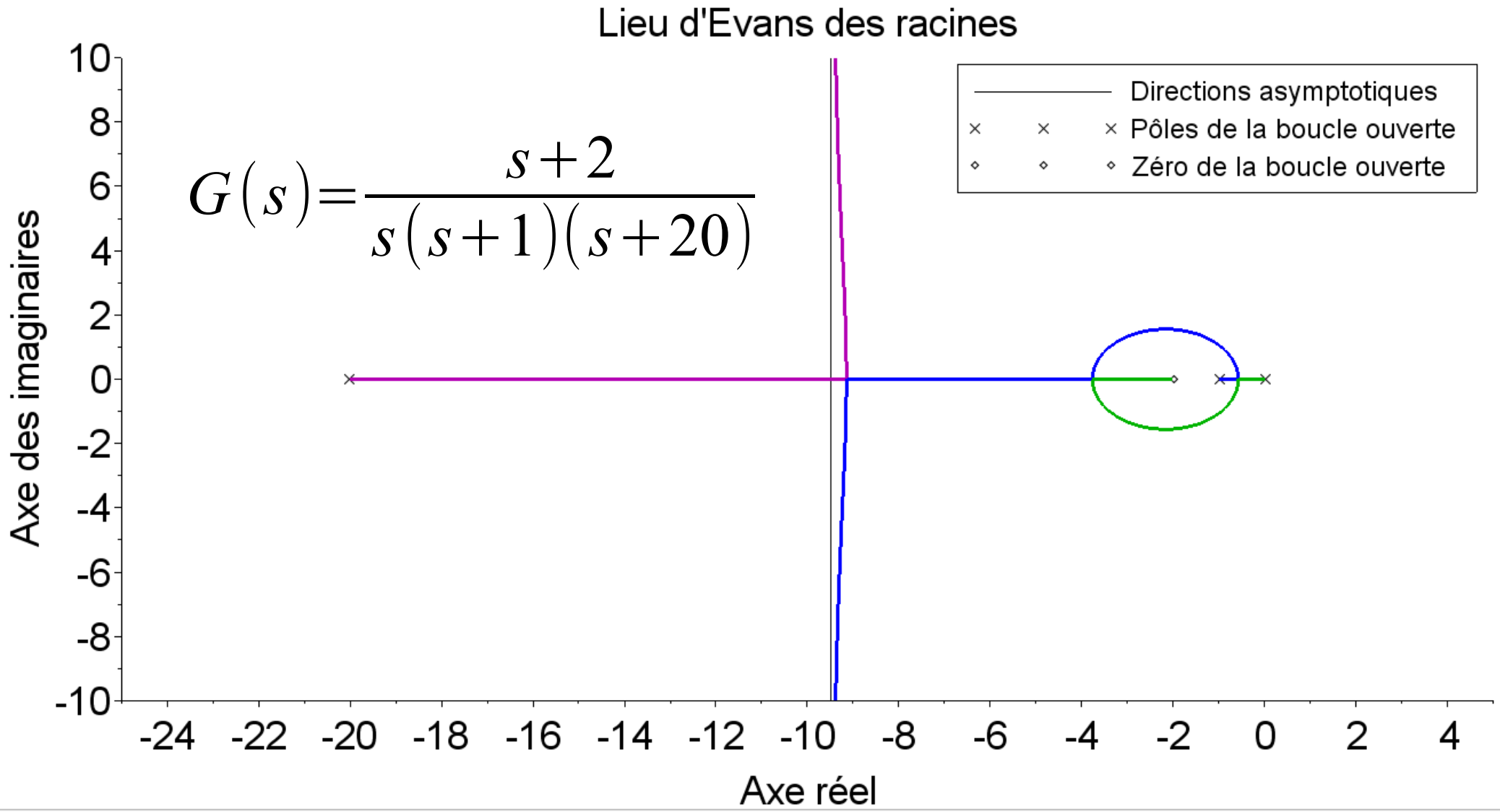
Controlador avanço de fase



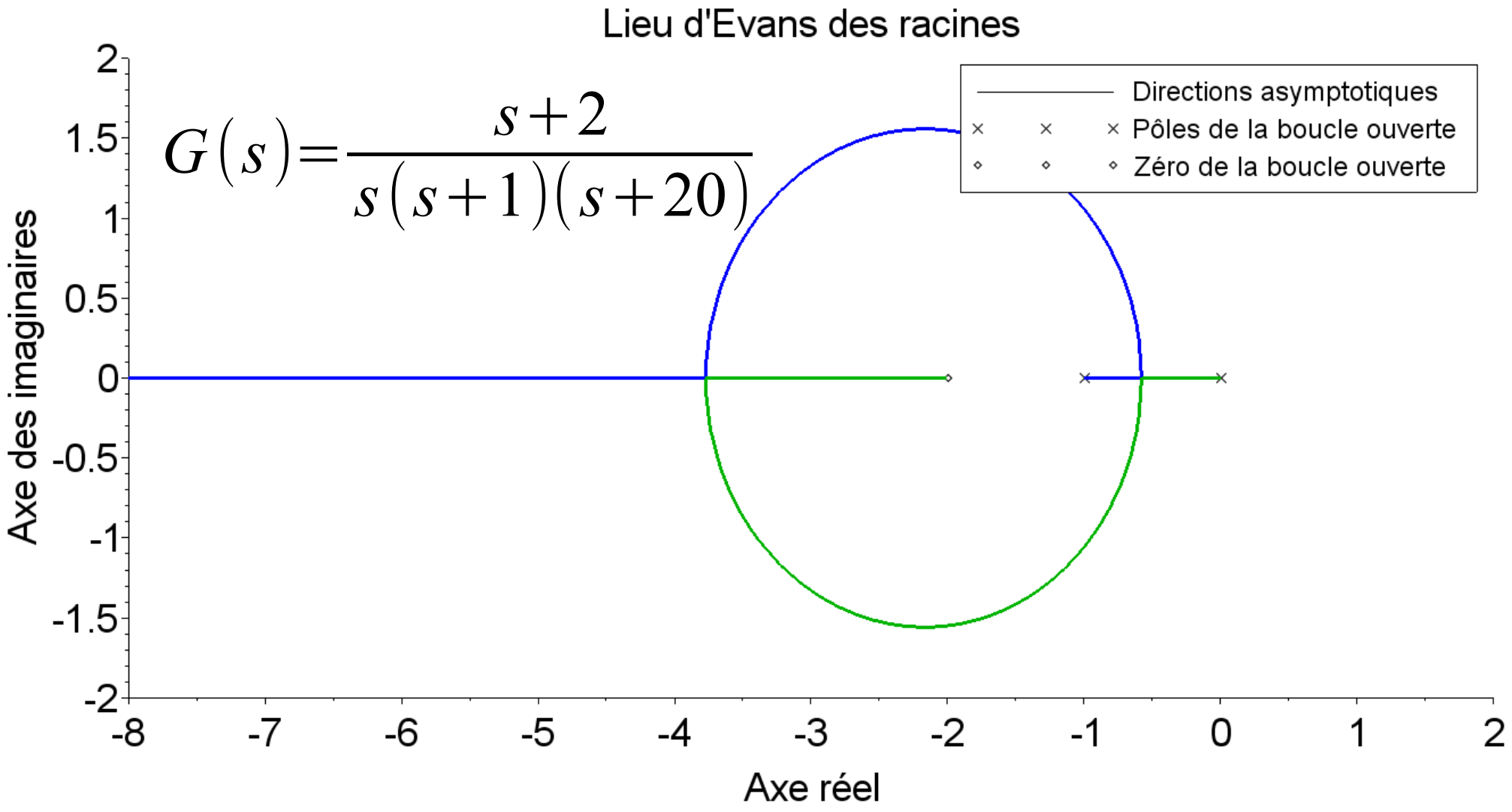
Controlador avanço de fase



Controlador avanço de fase



Controlador avanço de fase



Controlador avanço de fase

Figure 5.23 Root loci for three cases with $G(s) = \frac{1}{s(s+1)}$: (a) $D(s) = \frac{(s+2)}{(s+20)}$; (b) $D(s) = \frac{(s+2)}{(s+10)}$; (c) $D(s) = s + 2$ (solid lines)

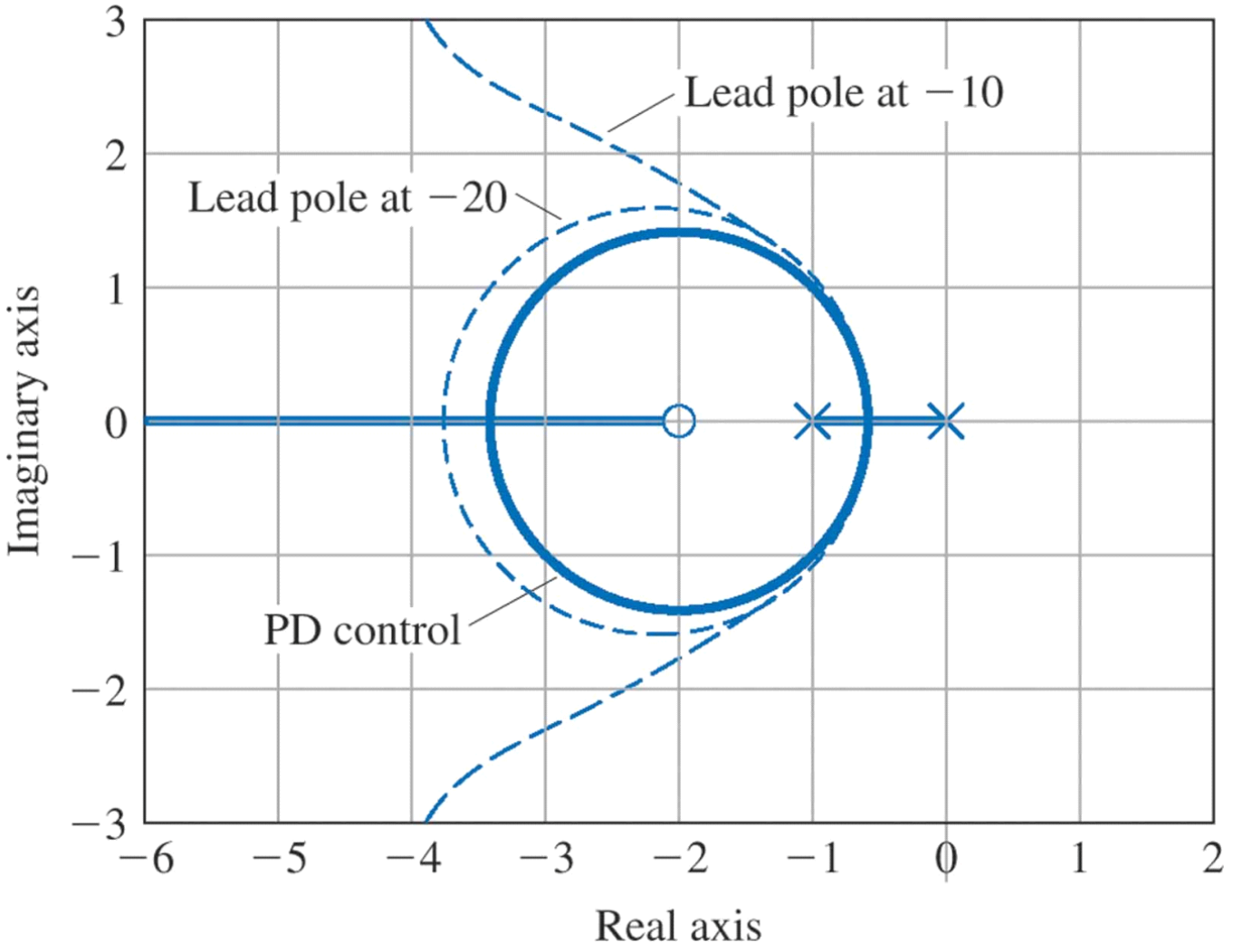


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Figure 5.24 Root locus for lead design

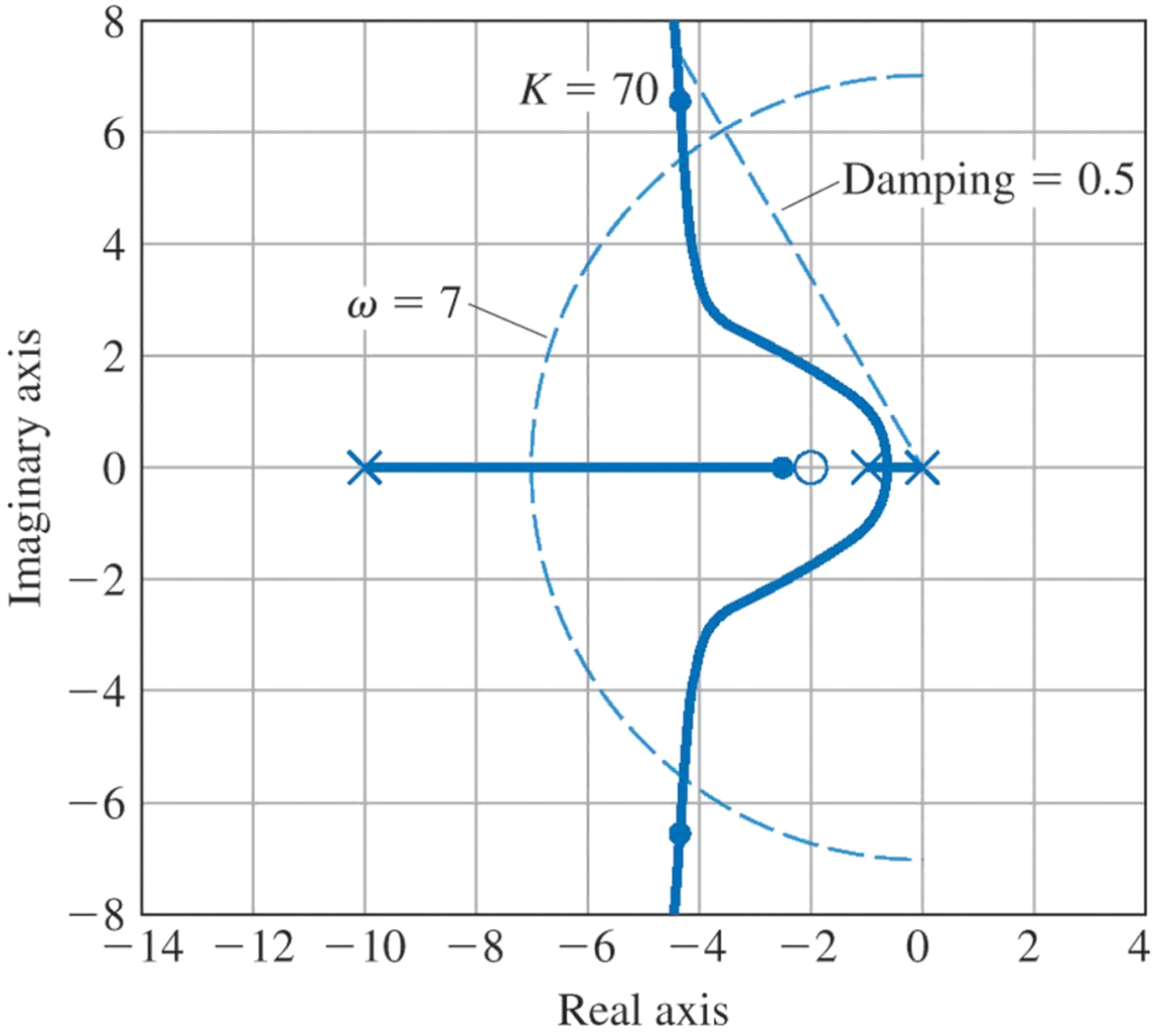

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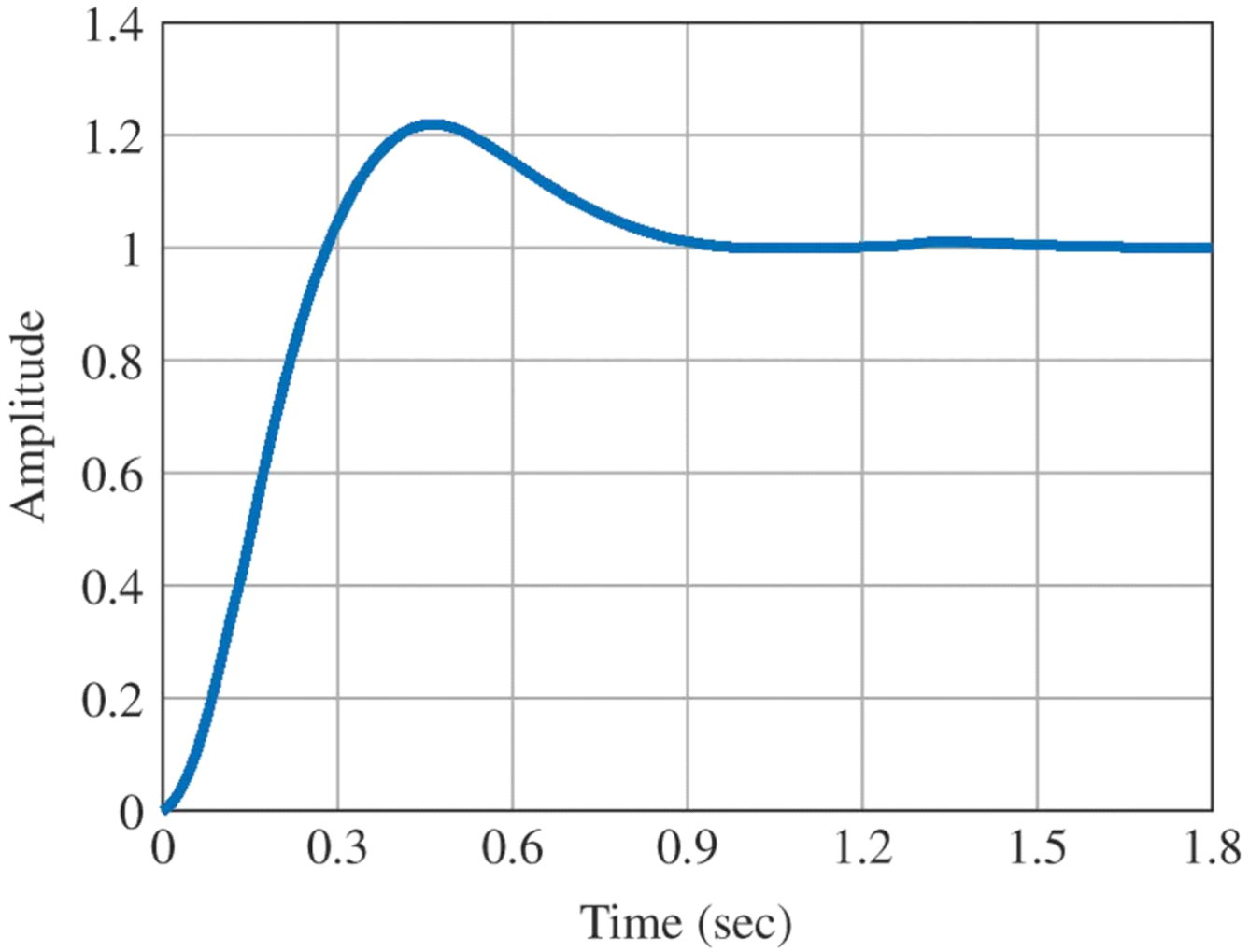
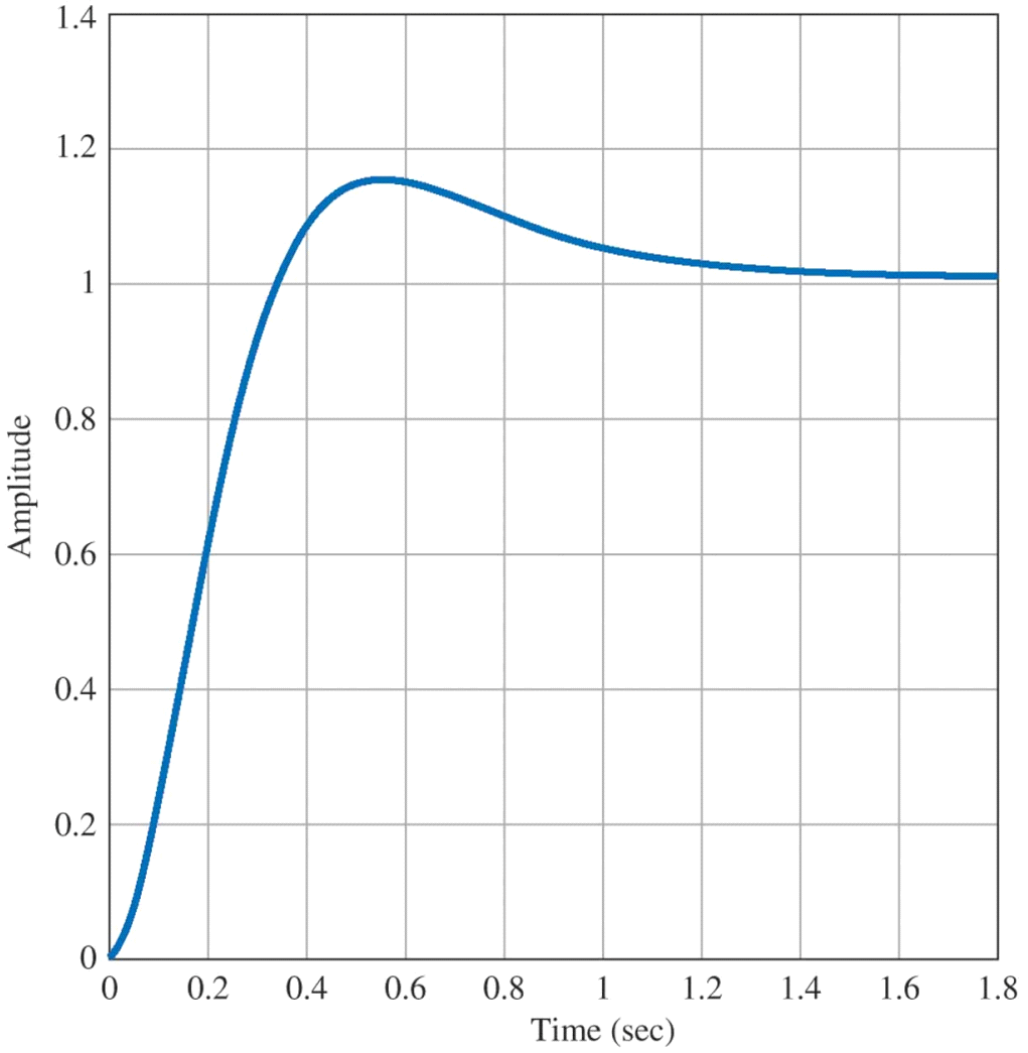
Figure 5.25 Step response for Example 5.11



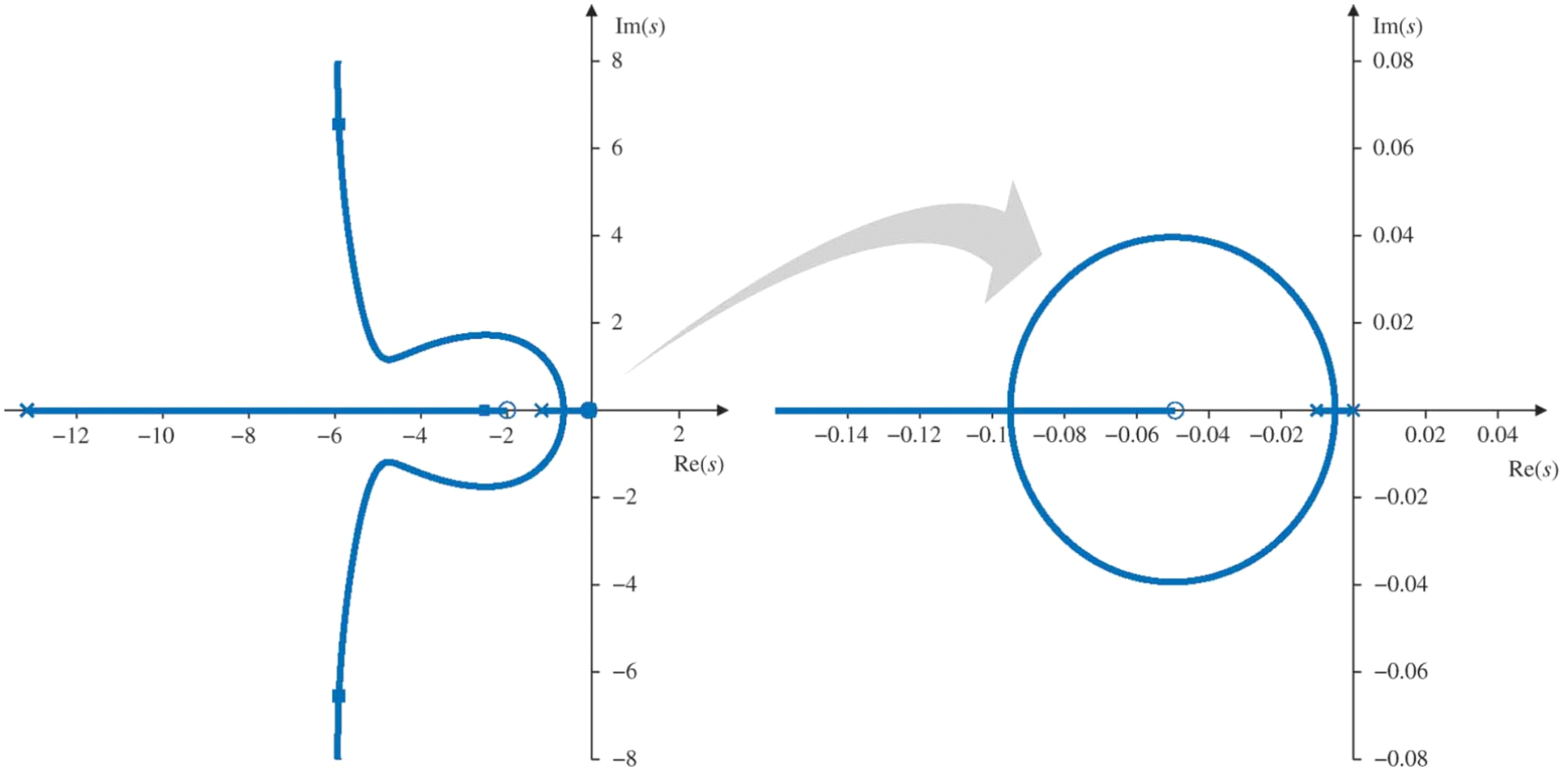
Controlador avanço de fase

Figure 5.27 Step response for $K = 91$ and $L(s) = \frac{(s+2)}{(s+13)} \frac{1}{s(s+1)}$



Controlador avanço-atraso de fase

Figure 5.28 Root locus with both lead and lag compensations



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