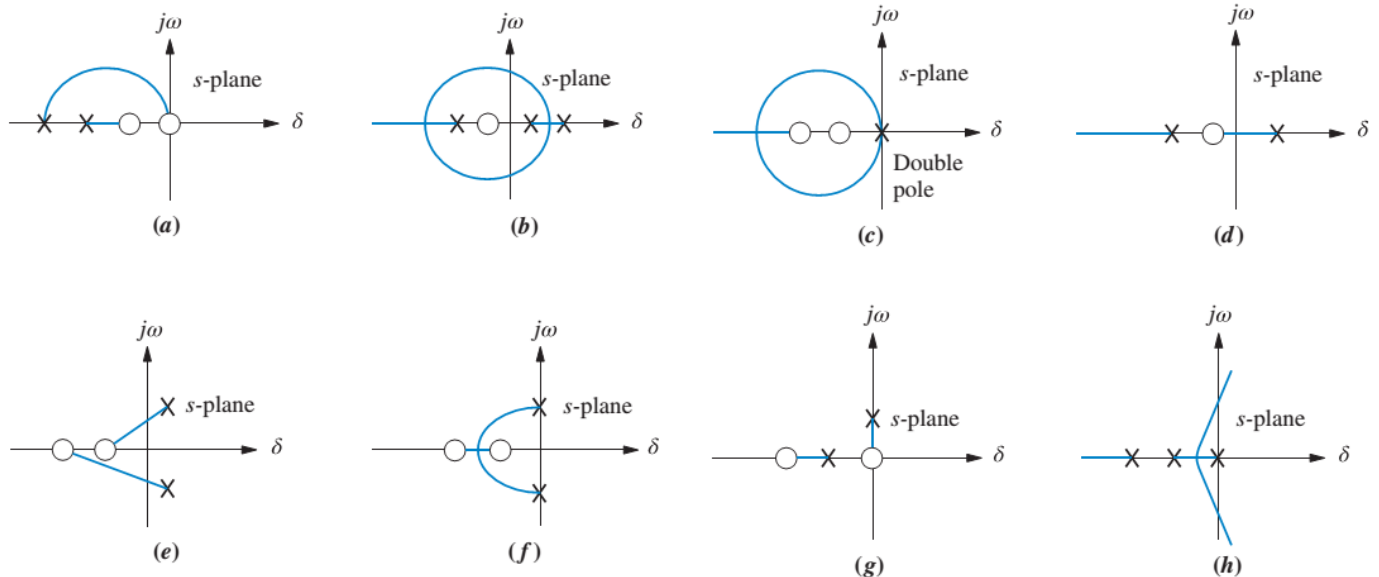


## Assignment 11 (ELEC 341 L11\_RootLocus)

### Problem 1:

For each of the root loci shown in Figure, tell whether or not the sketch can be a root locus. If the sketch cannot be a root locus, explain why. Give *all* reasons.



FIGURE

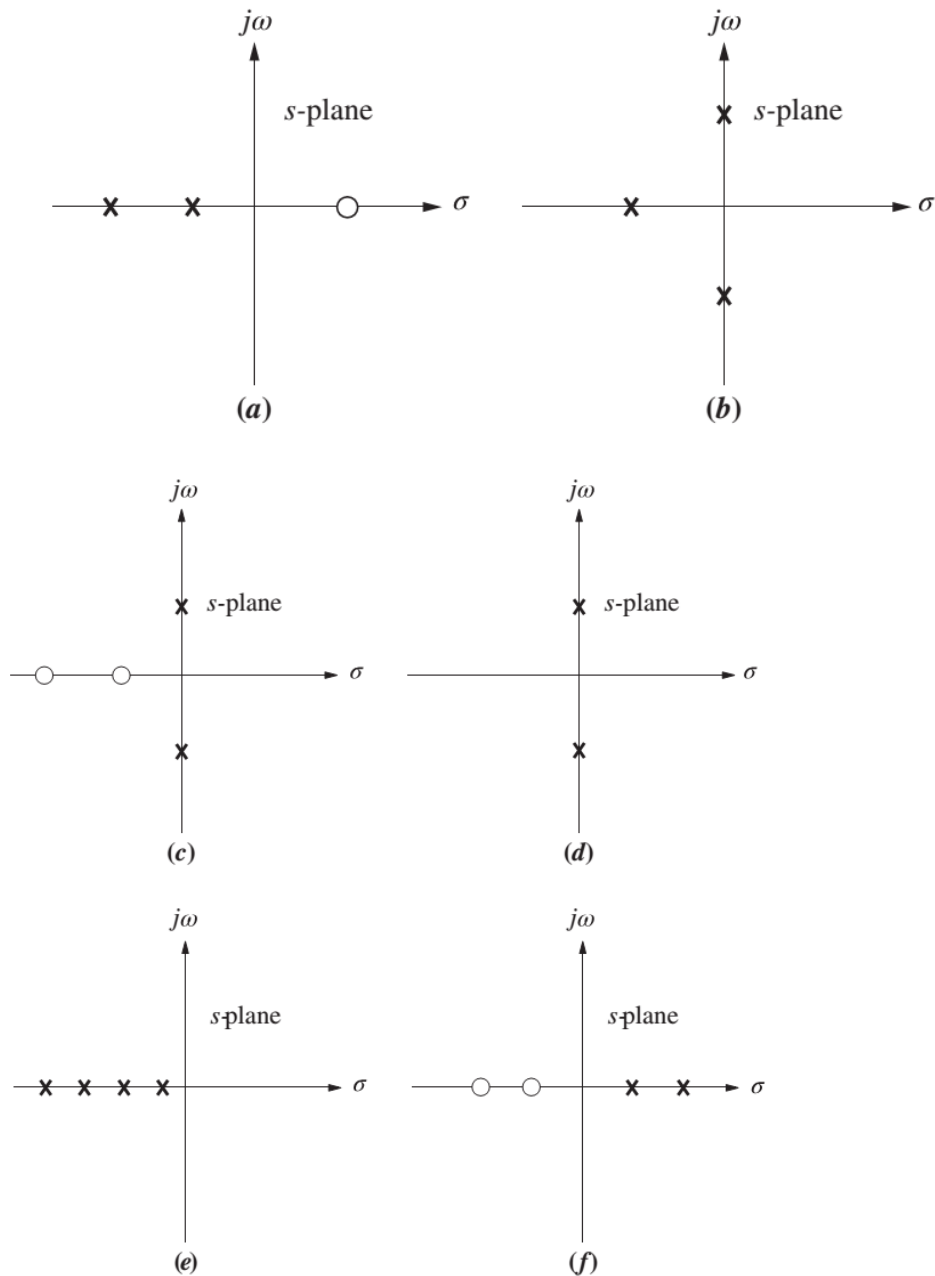
### Solution:

- a. No: Not symmetric; On real axis to left of an even number of poles and zeros
- b. No: On real axis to left of an even number of poles and zeros
- c. No: On real axis to left of an even number of poles and zeros
- d. Yes
- e. No: Not symmetric; Not on real axis to left of odd number of poles and/or zeros
- f. Yes
- g. No: Not symmetric; real axis segment is not to the left of an odd number of poles
- h. Yes

Assignment 11 (ELEC 341 L11\_RootLocus)

Problem 2:

Sketch the general shape of the root locus for each of the open-loop pole-zero plots shown in Figure .



FIGURE

Assignment 11 (ELEC 341 L11\_RootLocus)

Solution:

