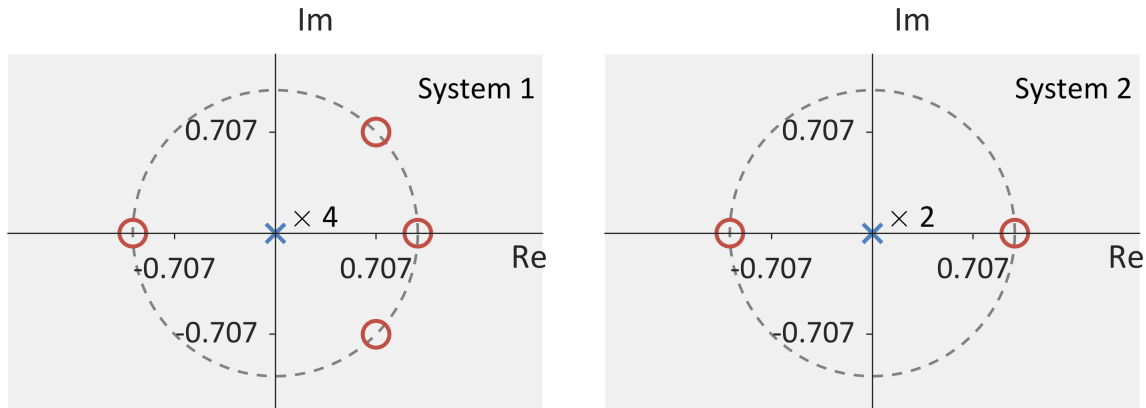


Question #1: Consider the systems given by the following pole-zero plots.



- (a) Draw a block diagram of the FIR cascade form implementation for System 1. Design the implementation so that complex conjugate pairs are together. **Ensure that you use real values on the connections in the block diagram.**

- (b) Draw a block diagram of the FIR direct form implementation for System 1. Design the implementation so that complex conjugate pairs are together. **Ensure that you use real values on the connections in the block diagram.**

- (c) Draw a block diagram of the FIR frequency sampling implementation for System 2. **You may use complex values for the connections in the block diagram.**