Backward difference method

Matched – Z-transform

Impulse invariance method

Bilinear transformation

For the conversion technique to be effective it has to satisfy

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2.LHP of S-plane, should map in to interior of the unit circle

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Analog filter H(s) should satisfy the following

1. H(s)should be a rational function of 's' and the coefficients of 's' should be real
2. Poles should lie on the LHS of S-plane
3. The number of zeros should be less than or equal to the number of poles