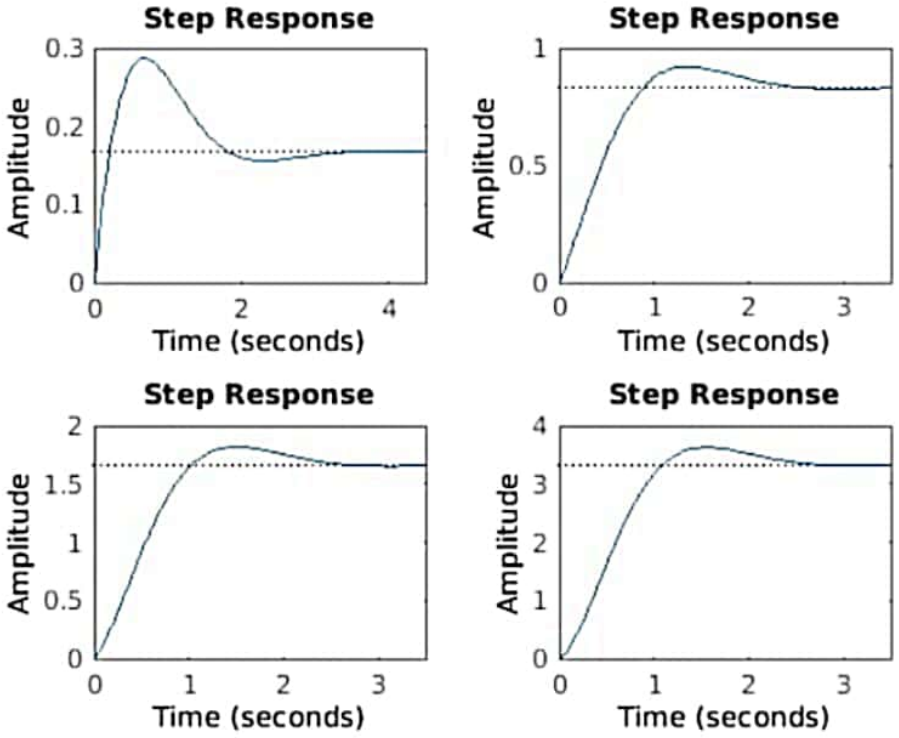
```
% Effect of addition on closed loop zeroes
sys = tf([1], [1 3 6])
z = [-1 -5 -10 -20]
for i=1:4
    sys_new = tf([1 -z(i)], [1])*sys
    subplot(2, 2, i)
    step(sys_new)
    stepinfo(sys_new)
end
```

```
sys =

         1
  -------------
  s^2 + 3 s + 6

Continuous-time transfer function.


z =

    -1    -5   -10   -20


sys_new =

       s + 1
  -------------
  s^2 + 3 s + 6

Continuous-time transfer function.


ans =

  struct with fields:

        RiseTime: 0.1658
    SettlingTime: 3.0252
     SettlingMin: 0.1508
     SettlingMax: 0.2867
       Overshoot: 72.0403
      Undershoot: 0
            Peak: 0.2867
        PeakTime: 0.6754


sys_new =

       s + 5
  -------------
```

```
  s^2 + 3 s + 6

Continuous-time transfer function.


ans =

  struct with fields:

        RiseTime: 0.6566
    SettlingTime: 2.2140
     SettlingMin: 0.7514
     SettlingMax: 0.9198
       Overshoot: 10.3779
      Undershoot: 0
            Peak: 0.9198
        PeakTime: 1.3508


sys_new =

     s + 10
  -------------
  s^2 + 3 s + 6

Continuous-time transfer function.


ans =

  struct with fields:

        RiseTime: 0.7398
    SettlingTime: 2.3284
     SettlingMin: 1.5323
     SettlingMax: 1.8183
       Overshoot: 9.0973
      Undershoot: 0
            Peak: 1.8183
        PeakTime: 1.5044


sys_new =

     s + 20
  -------------
  s^2 + 3 s + 6

Continuous-time transfer function.


ans =

  struct with fields:
```

```
    RiseTime: 0.7623
SettlingTime: 2.3834
  SettlingMin: 3.0030
  SettlingMax: 3.6282
    Overshoot: 8.8459
   Undershoot: 0
         Peak: 3.6282
     PeakTime: 1.5658
```



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