fidélitas
Universidad

CONTROL AUTOMATICO

Compensador de error

Profesor: Erick Salas Chaverri.

Jeffry Calderón Montero

$$kp = \lim_{s\to 0} G(s)$$

$$\lim_{s\to 0} \frac{1}{(s+2)(s+3)} = \frac{1}{6}$$

$$E = \frac{1}{1+kp} = \frac{1}{1+\frac{1}{6}} = \frac{6}{7}$$

$$E = \frac{6}{7}$$

$$E10\% = E*0.9 = \frac{6}{7}*0.9 = 0.771429$$

$$\frac{1}{1+k10\%} = 0.771429$$

$$k10\% = 0.296296$$

$$k10\% = \frac{Z}{P}*kp$$

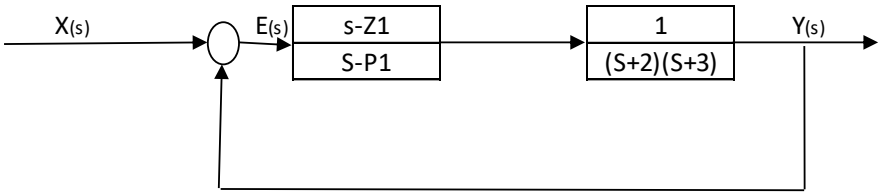
$$P = 1$$

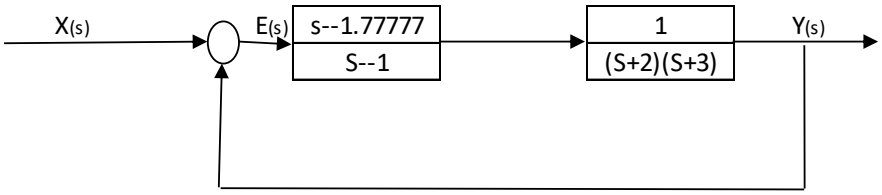
$$0.296296 = \frac{Z}{-1}\cdot\frac{1}{6} = -1{,}77777$$

$$P = -1 \qquad Z = -1{,}77777$$

$$\lim_{s\to 0} \frac{S-Z0}{S-P0} * \frac{1}{(s+2)(s+3)}$$

$$\lim_{s\to 0} \frac{S--1.77777}{S--1} * \frac{1}{(s+2)(s+3)} = 0.296296$$






```
octave:1> num=[1 1.77777]
num =

   1.0000   1.7778

octave:2> den=[1 6 11 6]
den =

    1    6   11    6

octave:3> G0=tf(num,den)

Transfer function 'G0' from input 'u1' to output ...

            s + 1.778
 y1:  ----------------------
      s^3 + 6 s^2 + 11 s + 6
```

```
Transfer function 'G1' from input 'u1' to output ...

              s + 1.778
 y1:  -------------------------
      s^3 + 6 s^2 + 12 s + 7.778
```