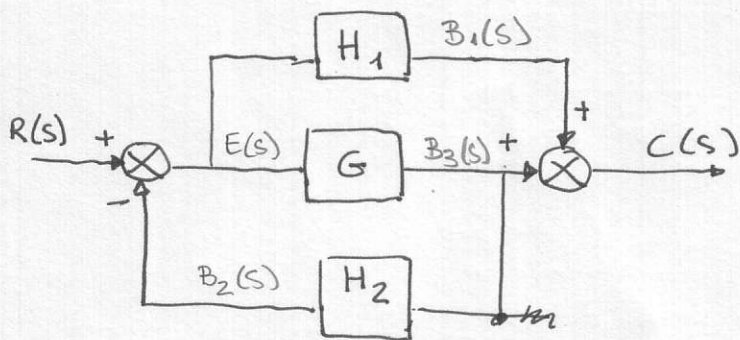


Ejercicio n.º 2 (a) [página 234 Ed. Doust].



$$C(s) = B_1(s) + B_3(s)$$

$$B_1(s) = H_1(s) \cdot E(s)$$

$$B_2(s) = H_2(s) \cdot B_3(s)$$

$$B_3(s) = G(s) \cdot E(s)$$

$$E(s) = R(s) - B_2(s)$$

$$C(s) = H_1(s) \cdot E(s) + G(s) \cdot E(s)$$

$$C(s) = [H_1(s) + G(s)] \cdot E(s)$$

$$E(s) = R(s) - H_2(s) \cdot B_3(s) =$$

$$= R(s) - H_2(s) \cdot G(s) \cdot E(s)$$

$$E(s) + H_2(s) \cdot G(s) \cdot E(s) = R(s)$$

$$E(s) [1 + H_2(s) \cdot G(s)] = R(s)$$

$$E(s) = \frac{R(s)}{1 + H_2(s) \cdot G(s)}$$

$$C(s) = [H_1(s) + G(s)] \cdot \frac{R(s)}{1 + H_2(s) \cdot G(s)}$$

$$\frac{C(s)}{R(s)} = \frac{H_1(s) + G(s)}{1 + H_2(s) \cdot G(s)}$$