6.20 Halle la capacitancia equivalente en las terminales a-b del circuito de la figura 6.54.

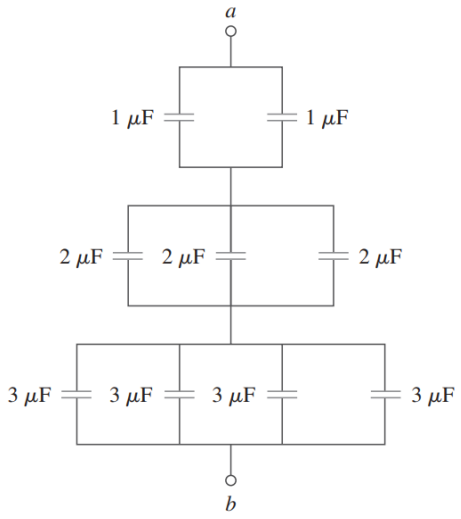
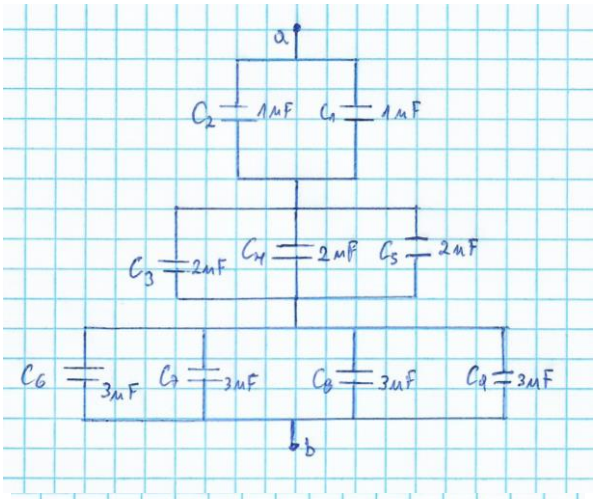


Figura 6.54
Para el problema 6.20.



$C_{eq_1} = C_1 + C_2$

$C_{eq_1} = 1 + 1 = 2\,\mu F$

$C_{eq_2} = 2 + 2 + 2 = 6\,\mu F$

$C_{eq_3} = 3 + 3 + 3 + 3 = 12\,\mu F$

$\frac{1}{C_{eq}} = \frac{1}{C_{eq_1}} + \frac{1}{C_{eq_2}} + \frac{1}{C_{eq_3}}$

$\frac{1}{C_{eq}} = \frac{1}{2} + \frac{1}{6} + \frac{1}{12}$

$C_{eq} = \frac{12}{11}\,\mu F$