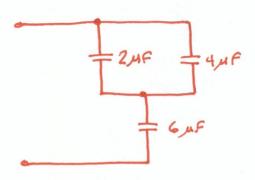# Problem #11

Given three capacitors with values 2 µF, 4 µF and 6 µF, can the capacitors be interconnected so that the combination is an equivalent 3 µF?

Yes, as follows:

Verification:

$$C_{eq} = \frac{1}{\frac{1}{2\mu F + 4\mu F} + \frac{1}{6\mu F}} = \frac{6\mu F}{1 + 1} = 3\mu F$$