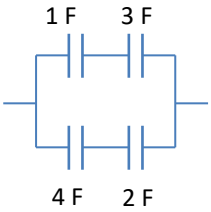
CONCEPT: COMBINING CAPACITORS IN SERIES AND PARALLEL

● In Circuit problems, we can COLLAPSE / COMBINE capacitors into a SINGLE _____ capacitor.

SERIES CONNECTION	PARALLEL CONNECTION
- Direct connection, - Equivalent Capacitance: $\frac{1}{C_{eq}} =$ _____	- Splits off, forms a loop - Equivalent Capacitance: $C_{eq} =$ _____

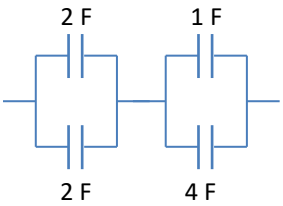
● For circuits with combinations, find C_{eq}'s from inside → outside.

EXAMPLE: What is the equivalent capacitance of the following capacitors?



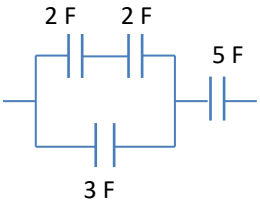
● For TWO capacitors in SERIES, $C_{eq} =$ _____

EXAMPLE: What is the equivalent capacitance of the following capacitors?



EXAMPLE: EQUIVALENT CAPACITANCE OF 4 CAPACITORS

What is the equivalent capacitance of the following combination of capacitors?



PRACTICE: EQUIVALENT CAPACITANCE OF 4 CAPACITORS

What is the equivalent capacitance of the following capacitors?