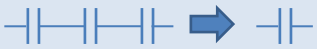
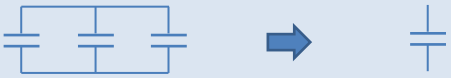
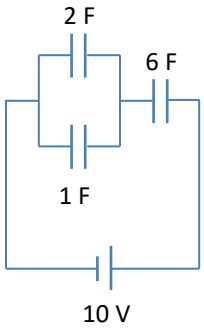
CONCEPT: SOLVING CAPACITOR CIRCUITS

- In Circuit problems, you'll be asked to find CHARGE and VOLTAGE across combinations of capacitors.

SERIES CONNECTION	PARALLEL CONNECTION
- Equivalent Capacitance: $$1/C_{eq} = 1/C_1 + 1/C_2 + 1/C_3$$ - Share **[CHARGE | VOLTAGE]** with EACH OTHER - Share **[CHARGE | VOLTAGE]** with C_{eq} 	- Equivalent Capacitance: $$C_{eq} = C_1 + C_2 + C_3$$ - Share **[CHARGE | VOLTAGE]** with EACH OTHER - Share **[CHARGE | VOLTAGE]** with C_{eq} 

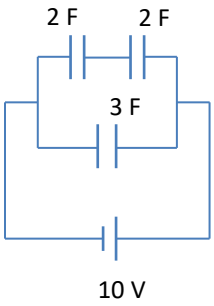
STEPS FOR CAPACITOR CIRCUITS
1) Find SINGLE EQUIVALENT capacitor
2) Find V & Q for C_{eq}
3) Work backwards to find V & Q for each capacitor

EXAMPLE**:** What is the charge and voltage of each of the capacitors in the following circuit?



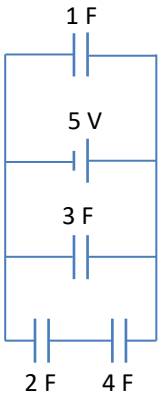
PRACTICE: FIND CHARGE & VOLTAGE IN ALL CAPACITORS

What is charge and voltage across each capacitor below?



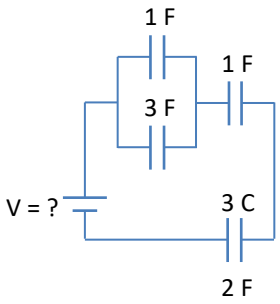
EXAMPLE: FIND CHARGE OF ONE CAPACITOR

What is the charge on the 3 F capacitor below?



PRACTICE: FIND VOLTAGE OF THE BATTERY

What is the voltage of the battery below?



PRACTICE: FIND CHARGE OF CAPACITOR IN A COMPLEX ARRANGEMENT

What is the charge on the 5 F capacitor?