## ADVANCED PHYSICS CLUB

APRIL 7, 2019

## TODAY'S MEETING

We discussed the superposition principle in linear electrical circuits. We used the superposition principle to solve the homework problems of the previous class.

We then discussed how the superposition principle allows to reduce complicated circuits to their Thevenin equivalents.

We practiced computing the Thevenin equivalent voltage by open-circuiting the points A and B and then the Thevenin resistance by short-circuiting A and B. We did 3 examples.

You might find the following links useful:

http://farside.ph.utexas.edu/teaching/3021/lectures/node57.html
http://hyperphysics.phy-astr.gsu.edu/hbase/electric/dcex6.html
https://en.wikipedia.org/wiki/Voltage\_source
https://en.wikipedia.org/wiki/Current\_source

Thevenin's theorem and superposition principle: https://en.wikipedia.org/wiki/Thevenin%27s\_theorem

## Homework

1. Replace the circuit shown in the Figure by a simpler (Thevenin or Norton) circuit producing the same results for loads connected to terminals A and B.



FIGURE 1.

## For the Next Meeting

The next club's meeting is at 2:40pm, room P-123, on Sunday, April 14. We plan to continue solving electricity and magnetism problems.

Important: from March 31 and on the club will meet in the room **P123** (Plaza level of Physics building).