

Topics Covered by Test 1
Test will be Wednesday, March 4th

- Thoroughly understand the “Big 3”.
 - Ohm’s Law
 - KCL
 - KVL
- Know the passive sign convention and use it consistently and correctly.
- Voltage Division (Series Circuit)
- Current Division (Parallel Circuit)
- Wheatstone bridge circuit
- Series Equivalent Resistance
- Parallel Equivalent Resistance
- Node Analysis – a method of systematically applying KCL and Ohm’s Law to develop a set of linear independent equations to solve for the voltage at each node relative to a reference node.
- Mesh Analysis – a method of systematically applying KVL and Ohm’s Law to develop a set of linear independent equations to solve for the mesh currents.
- Know what happens when a source is not ideal or a meter is not ideal.

Special Notes:

- The test will be closed notes and closed book. On this test, no equations will be given.
- The vast majority of the points are awarded for work up to and including substitution of the known quantities. If time is a problem, stop working after substituting the numbers and go to the next problem.
- Plan as though calculators will not be allowed.
 - The points awarded are based more on concepts than calculations – concentrate on getting the ideas/concepts correct.
 - I am tolerant of simple math mistakes (sign change errors in algebra manipulations) but not so much for major algebra no, no’s. so:
 - Please, please, please, be able to sum fractions by finding a common denominator, how to divide fractions and when terms can be legally canceled.
 - I never make the arithmetic very complicated, if it is, you are probably have made an error somewhere.