

## 1 Equations

1.  $P = \frac{dW}{dt} = IV$
2.  $I = \frac{dq}{dt}$
3.  $V = \frac{W}{q}$
4.  $R = \frac{\rho L}{A}$
5. Ohm's Law:  $V = IR$
6. Coulomb's Law:  $\vec{F} = \frac{1}{4\pi\epsilon_0} \frac{q_1 q_2}{r^2} \hat{r}$
7. Kirchhoff's Voltage Law:
8. Conductance:  $G = \frac{1}{R}$
9. Equivalent resistance:  $R_{eq} = \frac{V_{test}}{I_{test}}$