

ELECTRIC WORK AND POTENTIAL

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Supplementary Material for
PHY1308 (General Physics -
Electricity and Magnetism)

ANNOUNCEMENTS

- Homework 4:
 - Due next Monday by 9am
- Next quiz:
 - Friday, in class
 - Covers Homework 3
- First Exam!
 - Sep. 24, in class
 - Covers Homework 1-4 (Ch. 20-22)

COMPETITION 1: RANKINGS AND POINTS

- Category 1: Standard Play
 - Kristi (5.29s) +15
 - Jessica (5.56s) +10
 - Upama (6.77s) +5
- Category 2: Feature Play
 - Frank (1.87s) +15
 - Trang (1.94s) +10
 - Holly (2.02s) +5
 - Melissa (3.59s)
 - Catherine and Nick (4.57s)
 - August (10.94s)

DEFINITIONS

WORK (J):

$$W = \int \vec{F} \cdot d\vec{r}$$

DIFFERENCE IN POTENTIAL ENERGY: (J)

$$\Delta U_{AB} = -W_{AB} = -\int_A^B \vec{F} \cdot d\vec{r}$$

DIFFERENCE IN ELECTRIC POTENTIAL: (J/C = VOLTS)

$$\Delta V_{AB} = \Delta U_{AB} / q = -\int_A^B (\vec{F} / q) \cdot d\vec{r} = -\int_A^B \vec{E} \cdot d\vec{r}$$