

# READING ASSIGNMENT FOR FEBRUARY 6

## SECTION 21.4

### 21.4 - Calculating the Electric Potential

- Today, please concentrate on the rest of this section.
- Potential of a point charge - comes from calculus. There's no way for me to derive this equation. So the fact that the *potential* depends on  $1/r$  may be super surprising and a little confusing.
- This equation  $V = kQ/r$  comes from putting the point of zero potential at "infinity". We'll practice in class how to put the zero someplace else.
- Outside a charged sphere, the equation for potential is the same as that of a point charge. In other words, outside a sphere it behaves like a point charge.
- For multiple point charges, you simply add the individual potentials together.

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