UBC Physics 102

Lecture 4

Rik Blok



Outline

- ⊳ Electric charge
- ▷ Coulomb's law
- Vector form of Coulomb's law
- ⊳ End



Definition: electric charge



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 - Property of matter that can create force.



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Atom with nonzero charge.









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- Interactive Quiz: PRS 04a



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- All charges come in integer multiples of e.



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- Positive force means repulsion, negative means attraction.
- Only works for objects whose sizes are much smaller than r. Otherwise, how do you choose r?





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Definition: *Permittivity of free space*

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• Most equations look simpler if we use ϵ_0 instead of k (except Coulomb's law).



Interactive Quiz: PRS 04b



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- If confused, remember likes charges repel, opposites attract.

End

Interactive Quiz: PRS 04c



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- Practice Problems:
 - Ch. 21: Q. 5, 7, 9, 13
 - Ch. 21: Pr. 1, 3, 5, 7, 17, 21, 67, 69



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- Interactive Quiz: Feedback

