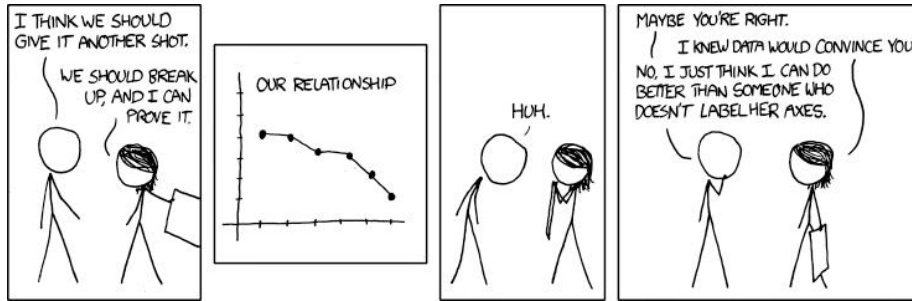


February 25, 2013      Physics 132      Prof. E. F. Redish

■ **Theme Music: Rustcycle**  
*Capacitance*

■ **Cartoon: Randall Munroe**  
*xkcd*



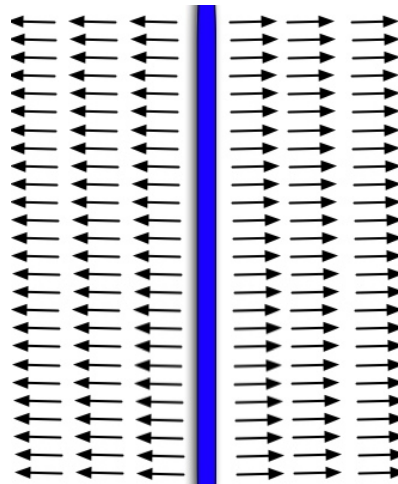
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Physics 132

1

## The sheet of charge

- Field is constant, pointing away from positive sheet, towards negative sheet.
- Constant!!?  
How can that be?



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Physics 132

3

### Two sheets of charge

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### Result

The fields of the two plates cancel each other on the outside.

The fields of the two plates add on the inside, producing double the field of a single plate.

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