Real time student feedback during lecture:

Musings on using "Top-Hat"
while teaching undergraduates

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What is "Top Hat"?

- Online tool for "clicker questions" via phone/tablet/computer

- This discussion not limited to specifically this software

- Top Hat subscription costs $26 /term ($75 for 4-years)

- Does your institution already use Top Hat? Equivalent?
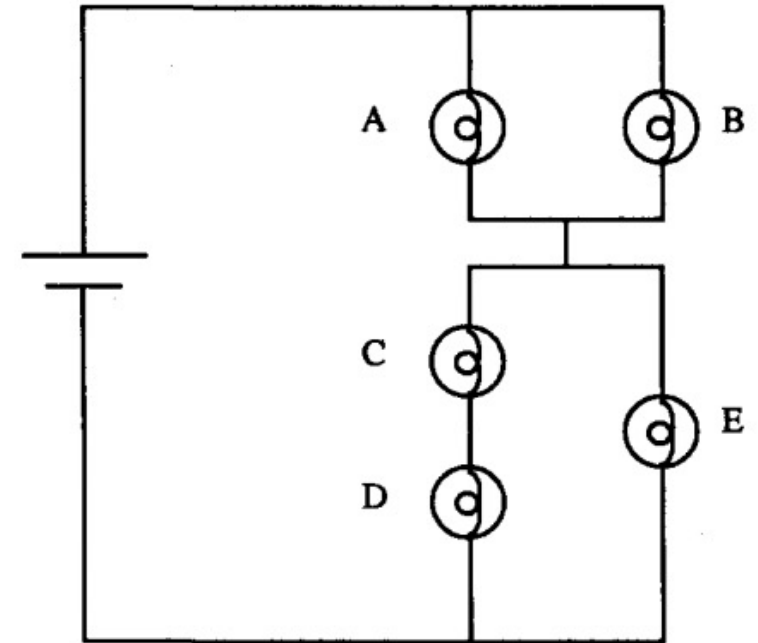
Student participation

- Feedback only works if students participate

- Make it worth a small amount (2%) of their mark
  - 1% for participation, 1% for correct answers
  - Be generous (mark it out of 80 for each 100 questions asked)

- Does your University have loaner phones for this?

- Worst case scenario: have some students participate on paper

Good questions

- Avoid calculations

- Test concept comprehension

- Quick to answer

- Plan to review if they get it wrong

Rank the bulbs according to brightness:
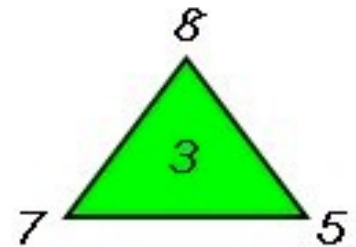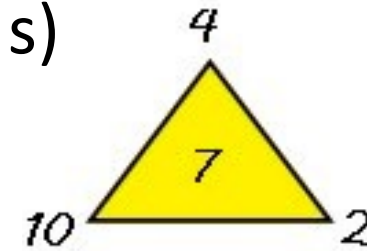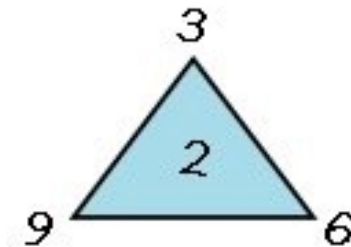
Question timing

- Give a set amount of time (60 – 90 s)

- Shorten that time as you go

- First question of the day is slow

- Bonus question prior to class will speed things up

Peer-to-peer learning

- If more than 75% get it correct, move on
  - "Ask your neighbours, have them explain their answer."

- If less than 75% get it correct, give them 2 minutes
  - "Find someone who disagrees with you, convince them."

- Ask the same question again
  - Less stress about getting the correct answer
  - More likely to work independently at first

Other uses

- Work through solutions:

- Test a concept interactively:

- Student led derivations

Overview

- Are your students already using Top Hat or equivalent?

- Great tool for keeping track of student understanding.

- Biggest challenge is maintaining lecture pace.

- Promotes participation in class and peer-to-peer instruction.

- Many additional uses.