

MA111: Contemporary mathematics

Entrance Slip (due 5 min past the hour):

Blair, Charlie, and Devin see an ad for a 3-bedroom apartment for \$1000/mo. Blair is willing to pay \$435/mo for the master bedroom, \$345/mo for the square bedroom, or \$305 per month for the long bedroom. Charlie is willing to pay \$365/mo for the master bedroom, \$295/mo for the square bedroom, or \$315/mo for the long bedroom. Devin is willing to pay \$305/mo for the master, \$350/mo for the square, or \$265/mo for the long.



Is it reasonable to rent this place? Explain how or why not:

Who should get which room?

How much should each pay per month?

	Mast	Square	Long
B	435	345	305
C	365	295	315
D	305	350	265

Schedule:

- Mini-exam 3 is in class, Thu Nov 6th, 2014
- Exam 3 is in class, Thu Nov 13th, 2014

While we are passing out the worksheet...

- Please turn in your entrance slips. We will do this every non-exam day.
Please bring your own 3x5 index cards.
- Someone explain why they shouldn't rent this place.
- Someone explain why they should.
- Someone who thinks they should rent. . .
who pays how much for what?
- Is this question harder than Tuesday's?

Important concepts

- The **value** depends on who is asked
- Splitting the bill might not be even if people get different values from it
- The **surplus** is the amount of money leftover after everyone pays the most they are willing for what they get
- A split is **feasible** if everything gets paid for and nobody pays more than they think they get in return

Exit quiz

- Alex, Blair, Casey, and Devin come back from a ghost tour where they found a rare necklace stained with the dying gasps of a cursed lover from the 18th century. While they agree the necklace belongs to all of them equally, they also agree it would be better if only one person kept it. For their own reasons, they value the item like this:

	Necklace	25% of Necklace
Alex's value	\$12	\$3
Blair's value	\$16	\$4
Casey's value	\$ 8	\$2
Devin's value	\$32	\$8

- Who gets the necklace, and how much should they pay the other people for their 25% of the necklace?