

Name: Solutions

Quiz 8

Three people are using Selfridge/Conway to divide up a berry tart. Below are their preferences, and the configuration of the tart:

	H	M	L
A	x	x	x
B	x	2x	3x
C	3x	x	2x

M	M	M
M	H	L
M	H	L
M	H	L

Suppose A likes all three types of tart equally, B likes L, but likes H twice as much as L, and likes M three times as much as L, and C likes M, but likes L twice as much as M, and likes H three times as much as M.

1) What's the total value of the tart to each of the players? (you can use integers for this)

A: 12    B: 24    C: 21

2) Suppose A divides the tart into three pieces by the columns (so we can call the pieces **left**, **middle** and **right**). Which piece would B trim?

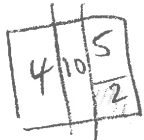


B trims the right piece

Suppose B makes the trimmings at the bottom of that piece, and *lightly* shade the trimmings on the picture above.

3) Continuing in round 1, who gets to pick first? C    What piece would they pick? middle

C trims  
who picks next? B    What piece would they pick? trimmed right piece



and who picks last? A    What piece would they get? left

4) If we continue onto round 2 for this example, who would divide the trimmings: A, B, or C?

C

5) True/False: When two players have the same values for all components in a pie, then any division created will be Pareto-optimal.

True