

Chapter 14 homework solutions

2) $a = 500,000$ $b = 200,000$ A gets manuscript. $q = \frac{500,000}{700,000} = \frac{5}{7}$

$$x_B = \frac{5}{7}(200,000) = 142,857.14$$

$$x_A = \frac{5}{7}(500,000) = 357,142.86$$

note sum is 500,000.00

A should pay B
\$142,857.14

4) $a = 330,000$ $b = 300,000$ $c = 240,000$ B gets house $q = \frac{300,000}{870,000} = \frac{30}{87} = \frac{10}{29}$

a) $x_A = \frac{10}{29}(330,000) = 113,793.10$

$$x_C = \frac{10}{29}(240,000) = 82,758.62$$

$$x_B = \frac{10}{29}(300,000) = 103,448.28$$

note sum is 300,000.00

B should pay A \$113,793.10
and C \$82,758.62

- b) fair to A is anything over 110,000 ✓
fair to B is anything over 100,000 ✓
fair to C is anything over 80,000 ✓

yes, it is fair

- c) one possible objective improvement is to give the house to A,
and have A pay B \$103,448.28, and pay C \$82,758.62.
Then x_A would be \$143,793.10.
B & C's stayed the same, but A's payoff increased.

5) a) If A gets house, $q = \frac{a}{a+b}$. Then $x_B = qb = \frac{ab}{a+b}$.

b) If B gets house, $q = \frac{b}{a+b}$. Then $x_A = qa = \frac{ab}{a+b}$.