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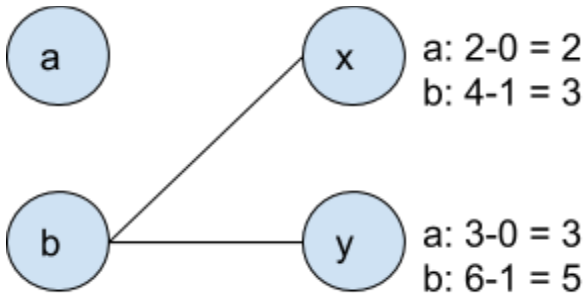
Chapter 10

1. Suppose we have a set of 2 sellers labeled $a$ and $b$, and a set of 2 buyers labeled $x$ and $y$. Each seller is offering a distinct house for sale, and the valuations of the buyers for the houses are as follows.

| Buyer | Value for $a$'s house | Value for $b$'s house |
|---|---|---|
| x | 2 | 4 |
| y | 3 | 6 |

Suppose that $a$ charges a price of 0 for his house, and $b$ charges a price of 1 for his house. Is this set of prices market-clearing? Give a brief (1-3 sentence) explanation; as part of your answer, say what the preferred-seller graph is with this given set of prices, and use this in your explanation.

No, this is not a market clearing price. This is because both buyers get a maximum payoff with seller b's house. The preferred seller graph has both buyers with a line leading to seller b.

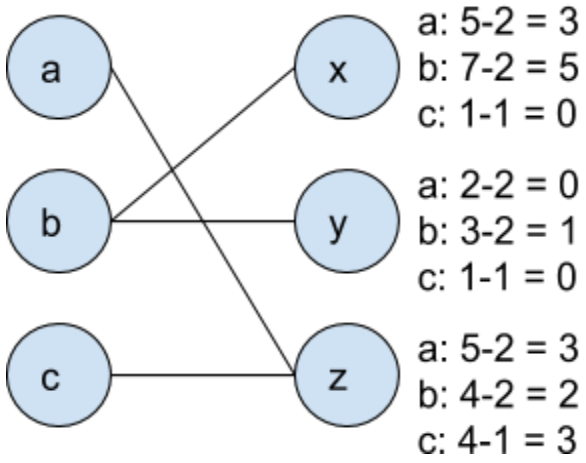


2. Suppose we have a set of 3 sellers labeled $a$, $b$, and $c$, and a set of 3 buyers labeled $x$, $y$, and $z$. Each seller is offering a distinct house for sale, and the valuations of the buyers for the houses are as follows.

| Buyer | Value for $a$'s house | Value for $b$'s house | Value for $c$'s house |
|---|---|---|---|
| x | 5 | 7 | 1 |
| y | 2 | 3 | 1 |
| z | 5 | 4 | 4 |

Suppose that sellers $a$ and $b$ each charge 2, and seller $c$ charges 1. Is this set of prices market-clearing? Give a brief explanation.

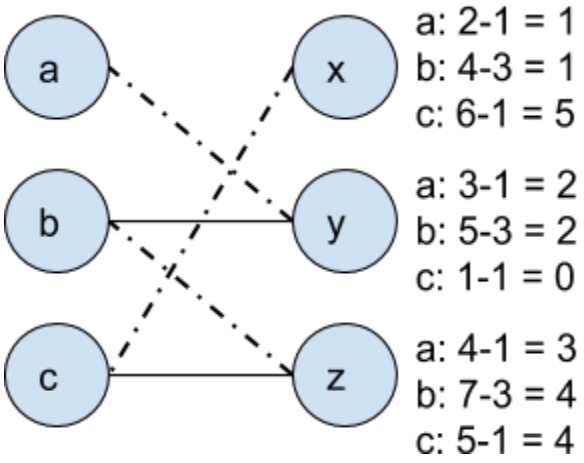
This is not a market clearing price, due to both buyers x and y having a preferred seller b.



3. Suppose we have a set of 3 sellers labeled $a$, $b$, and $c$, and a set of 3 buyers labeled $x$, $y$, and $z$. Each seller is offering a distinct house for sale, and the valuations of the buyers for the houses are as follows.

| Buyer | Value for $a$'s house | Value for $b$'s house | Value for $c$'s house |
|---|---|---|---|
| x | 2 | 4 | 6 |
| y | 3 | 5 | 1 |
| z | 4 | 7 | 5 |

Suppose that sellers $a$ and $c$ each charge 1, and seller $b$ charges 3. Is this set of prices market-clearing? Give a brief explanation.




Yes, this is a market clearing price, because all buyers can achieve their maximum payoff with the above shown matching (dotted lines).