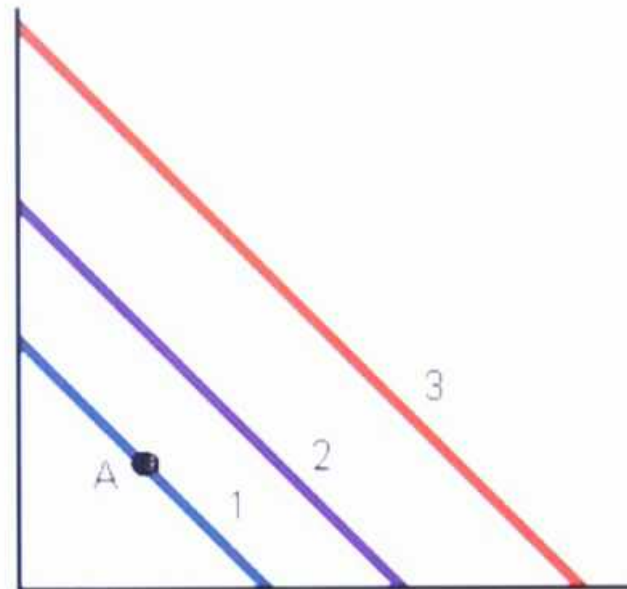


## Exceptional shapes of Indifference Curve

### 1) Indifference curve in case of Perfect Substitutes

If two goods X and Y are perfect substitute, their marginal rate of substitution, will be constant or one. And in such a case indifference curve will be straight line downward sloping.

comb	Coke	Pepsi
A	1	4
B	2	3
C	3	2
D	4	1



$$1 \text{ Coke} = 1 \text{ Pepsi} = 10 \text{ units}$$

### Perfect Substitute

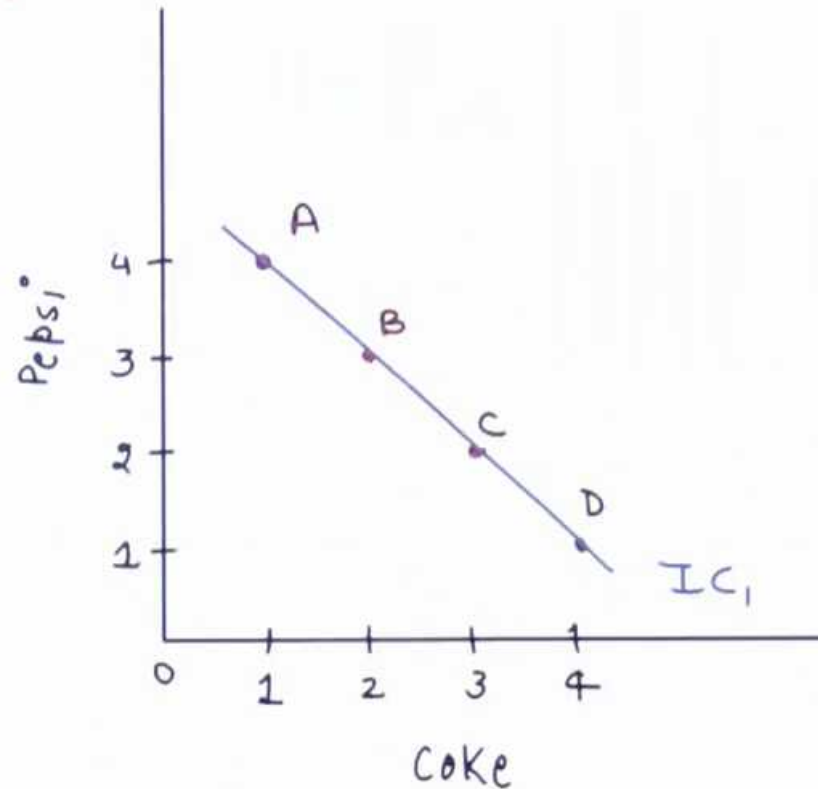
Comb.	Coke	Pepsi
A	1 <u>10</u>	4 <u>40</u>
B	2 <u>20</u>	3 <u>30</u>
C	3 <u>30</u>	2 <u>20</u>
D	4 <u>40</u>	1 <u>10</u>

50

50

50

60



$$1 \text{ Coke} = 1 \text{ Pepsi} = 10 \text{ utils}$$

### Perfect Substitute

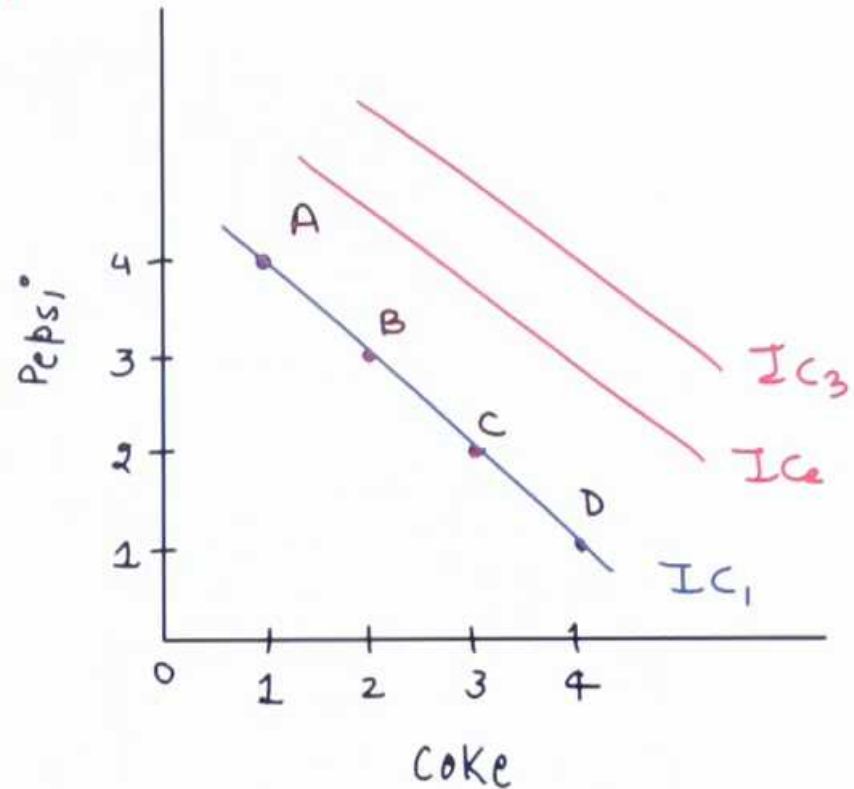
Comb.	Coke	Pepsi
A	1 10	4 40
B	2 20	3 30
C	3 30	2 20
D	4 40	1 10

50

50

50

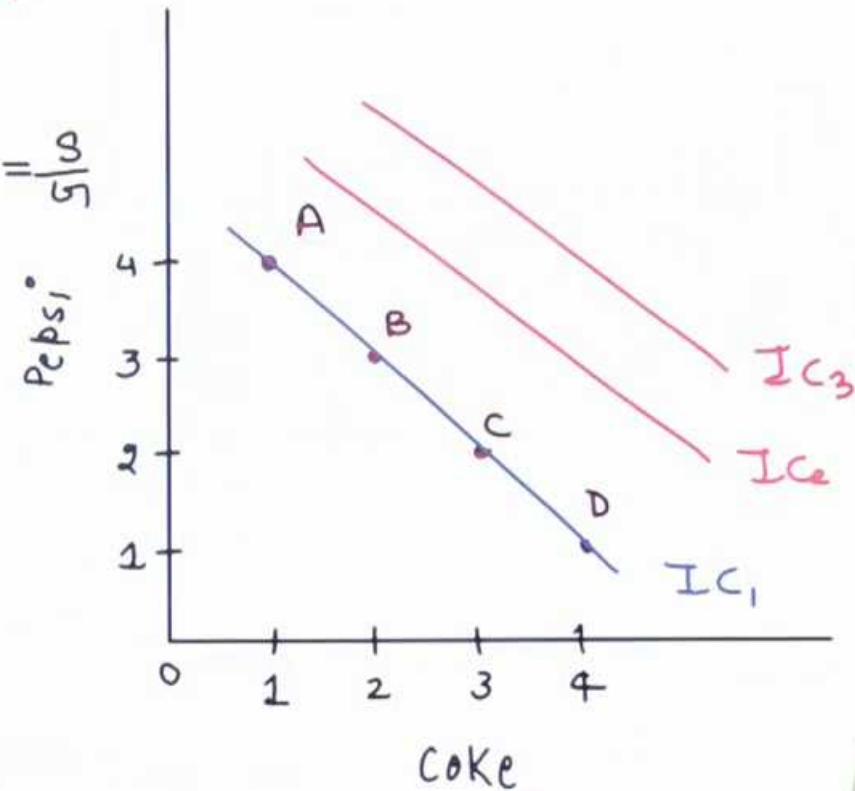
60



1 Coke = 1 Pepsi = 10 units

### Perfect Substitute

Comb.	Coke	Pepsi	MRS = $\frac{P}{C}$
A	1 } 10	4 } 40	-
B	2 } 20	3 } 30	$\frac{1}{1} = 1$
C	3 } 30	2 } 20	$\frac{1}{1} = 1$
D	4 } 40	1 } 10	$\frac{1}{1} = 1$

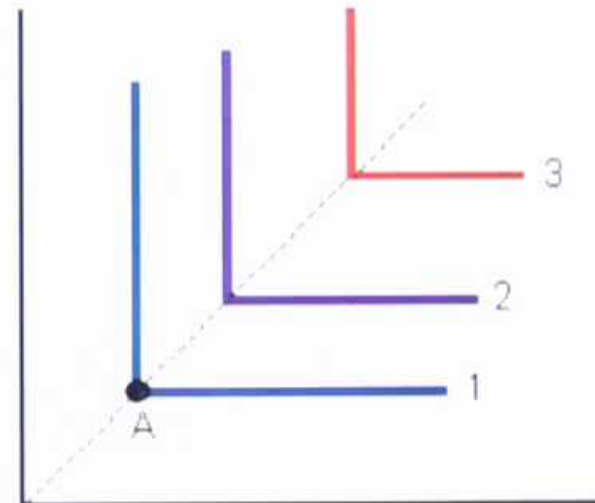




## 2) Indifference curve in case of Perfect Complements

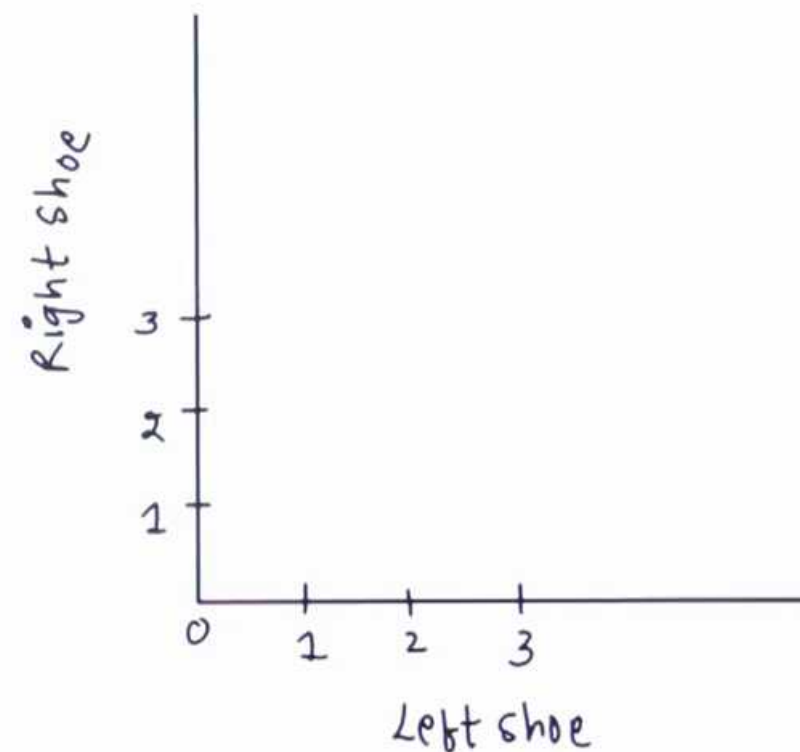
Perfect complements are the goods that are always consumed together in fixed proportion. For example, left and right shoes are perfect complements since one of them is of no use without the other. In this case indifference curve will be L- shaped.

comb	Left Shoes	Right Shoes
A	2	2
B	3	2
C	2	3



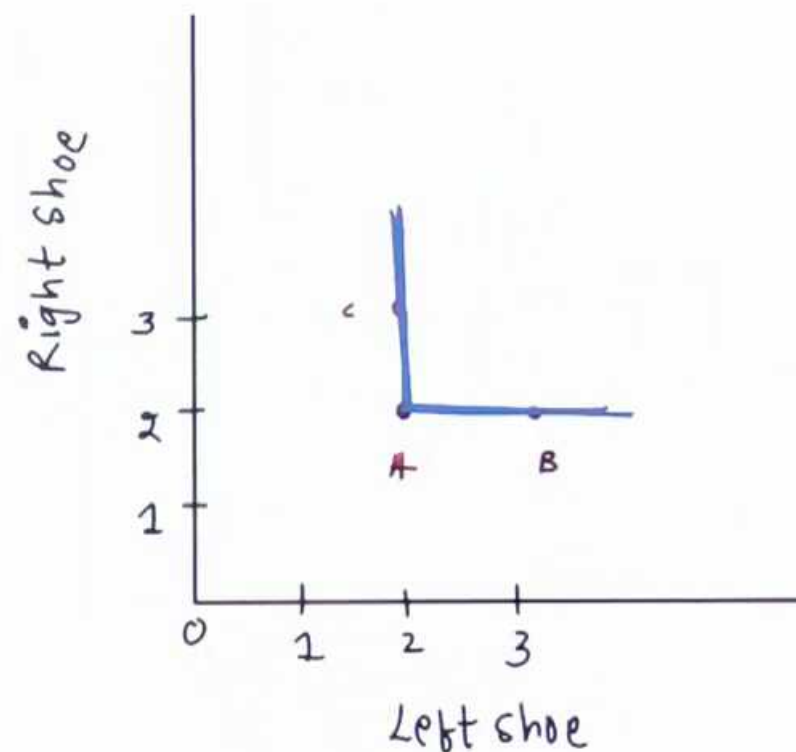
### Perfect Complements

Comb.	Left Shoes	Right Shoes	
A	2	2	→ 10 utils
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## Perfect Complements

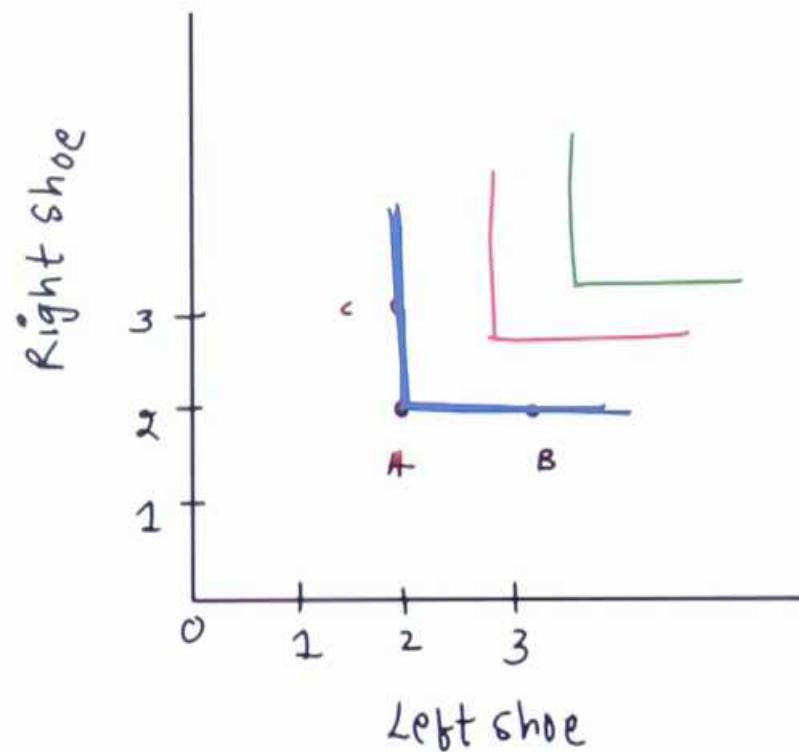
Comb.	Left shoes	Right shoes	
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### Perfect Complements

Comb.	Left shoes	Right shoes	
A	2	2	→ 10 utils
B	3	2	→ 10 utils
C	2	3	→ 10 utils

L-shaped



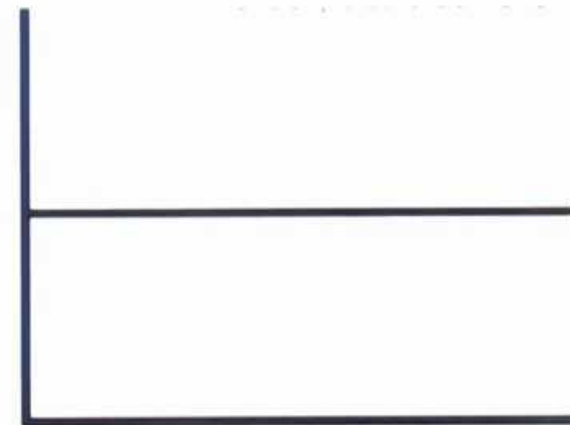


### 3) A goods that gives zero satisfaction

When a good that gives no satisfaction at all, a person is unwilling to sacrifice even the smallest amount of other good to obtain any quantity of the good which provide him zero satisfaction.

For example, case of meat for a vegetarian guy, whose indifference curves are horizontal straight line.

comb	Tomato	Meat
A	5	0
B	5	1
C	5	2
D	5	3
E	5	4

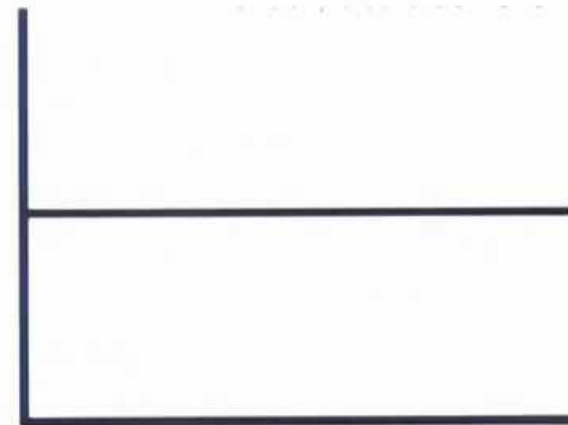


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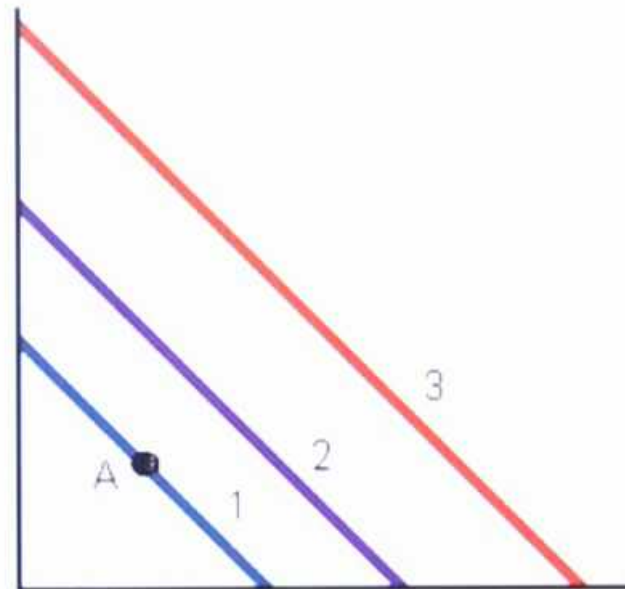


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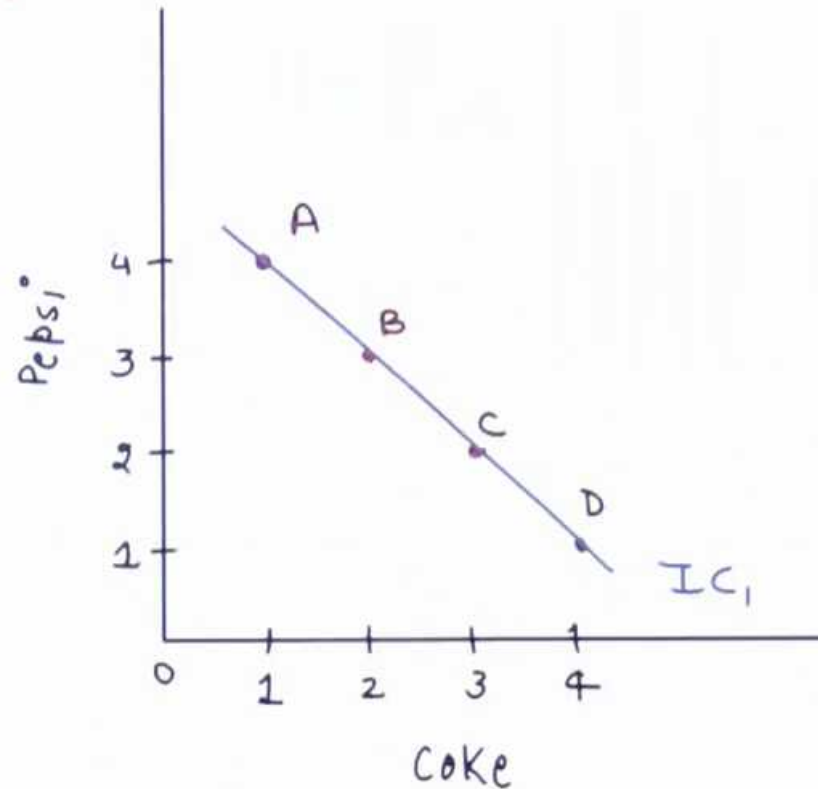


$$1 \text{ Coke} = 1 \text{ Pepsi} = 10 \text{ utils}$$

### Perfect Substitute

Comb.	Coke	Pepsi
A	1 10	4 40
B	2 20	3 30
C	3 30	2 20
D	4 40	1 10

50  
50  
50  
60





$$1 \text{ Coke} = 1 \text{ Pepsi} = 10 \text{ utils}$$

### Perfect Substitute

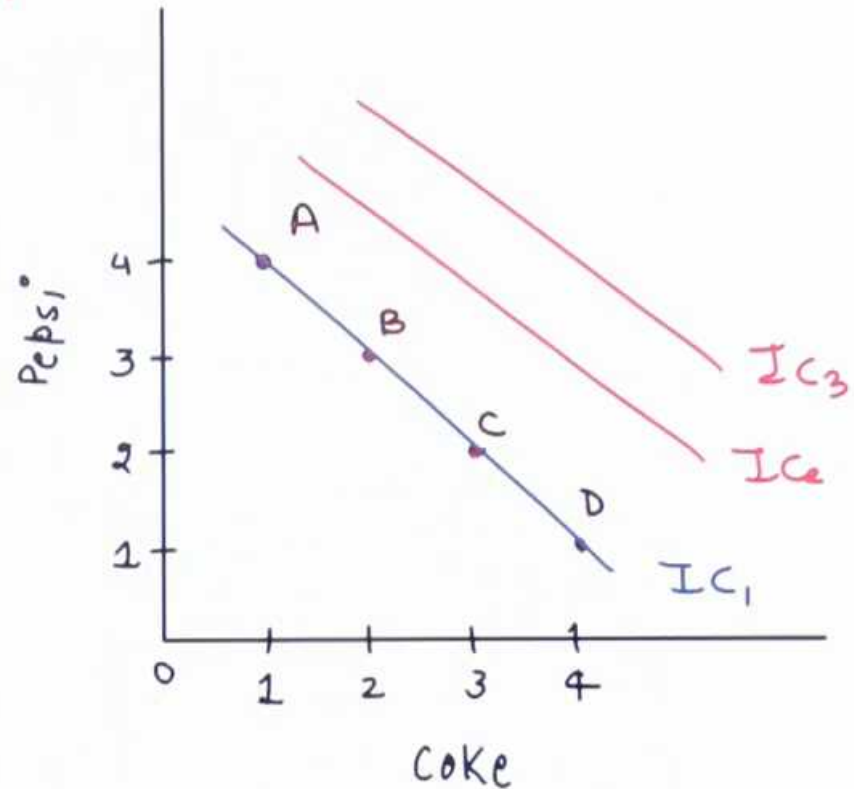
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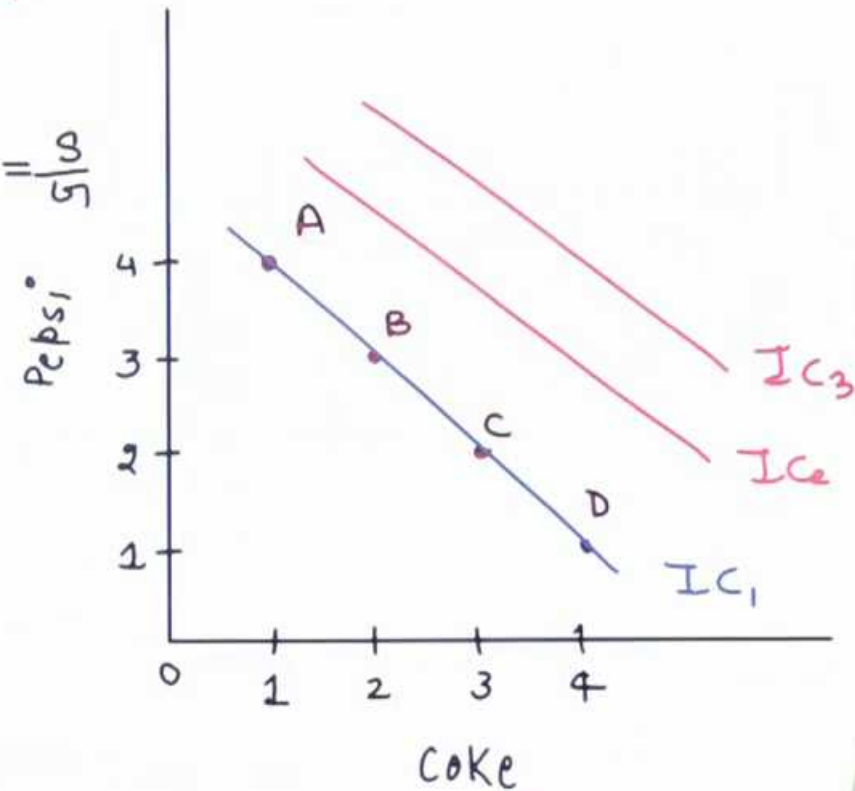




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### Perfect Substitute

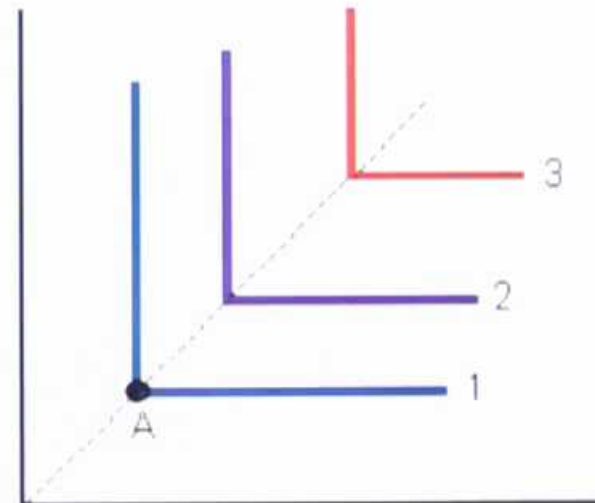
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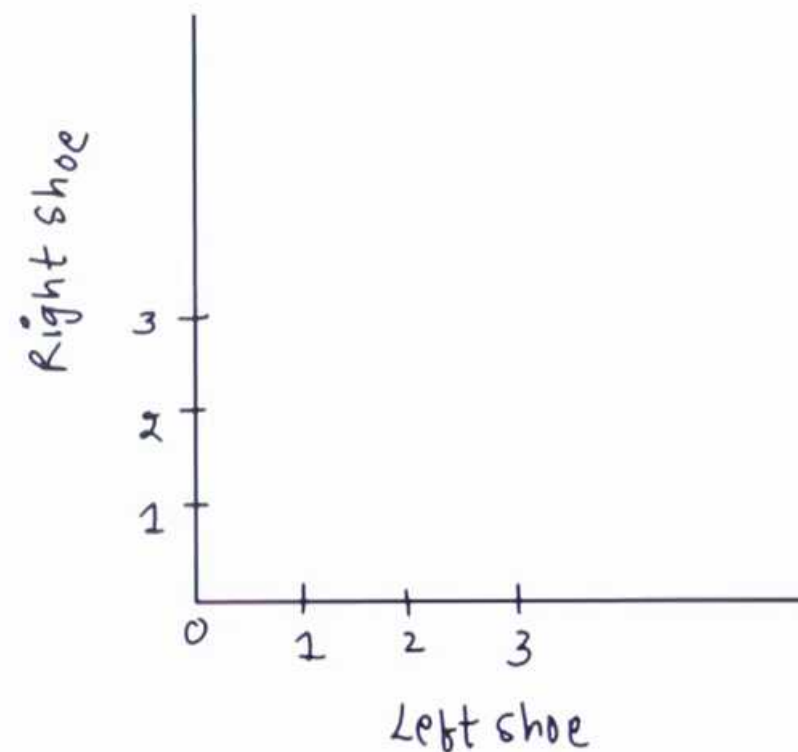
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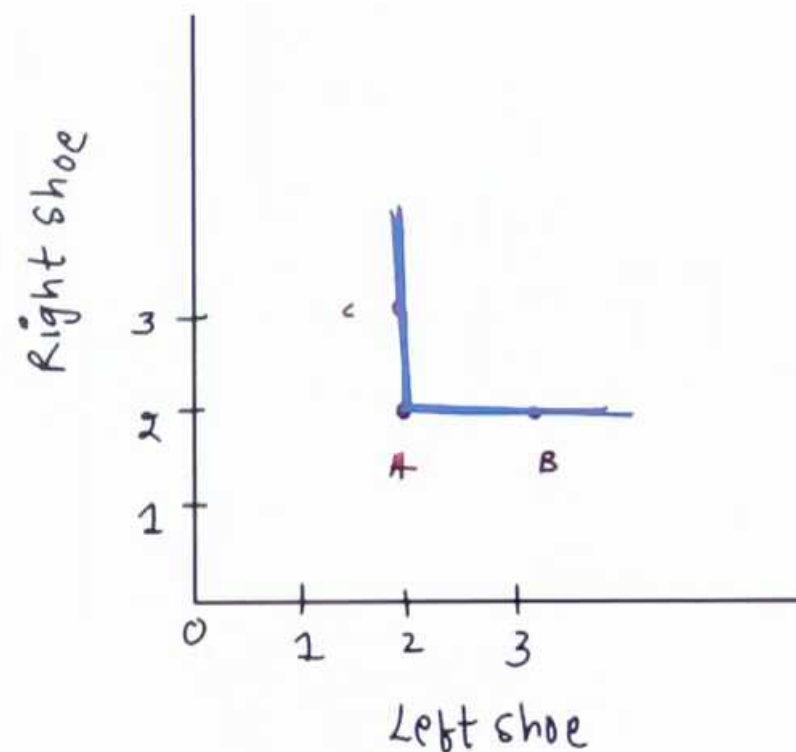
### Perfect Complements

Comb.	Left Shoes	Right Shoes	
A	2	2	→ 10 utils
B	3	2	→ 10 utils
C	2	3	→ 10 utils



## Perfect Complements

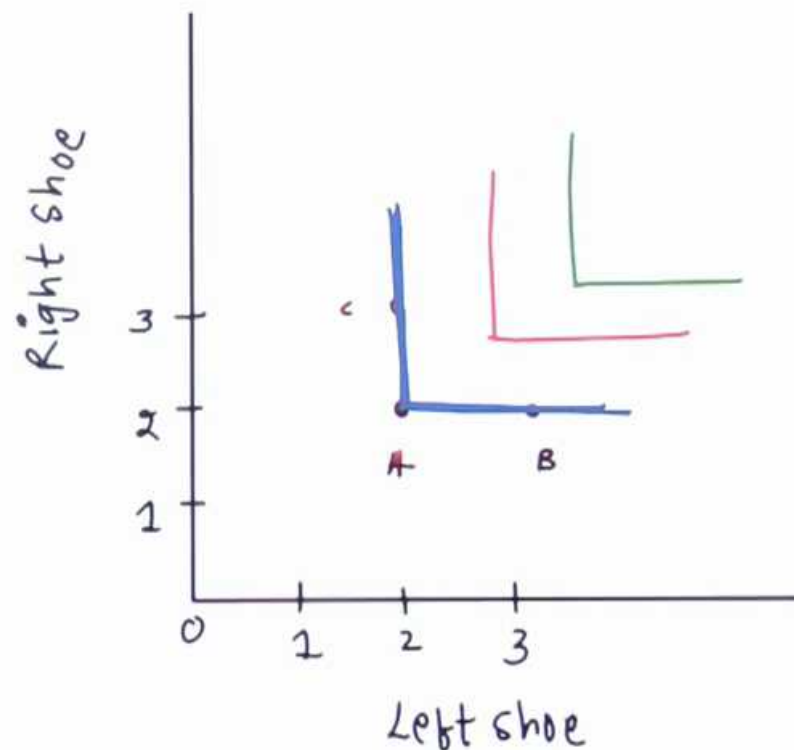
Comb.	Left shoes	Right shoes	
A	2	2	→ 10 utils
B	3	2	→ 10 utils
C	2	3	→ 10 utils



## Perfect Complements

Comb.	Left shoes	Right shoes	
A	2	2	→ 10 utils
B	3	2	→ 10 utils
C	2	3	→ 10 utils

L-shaped



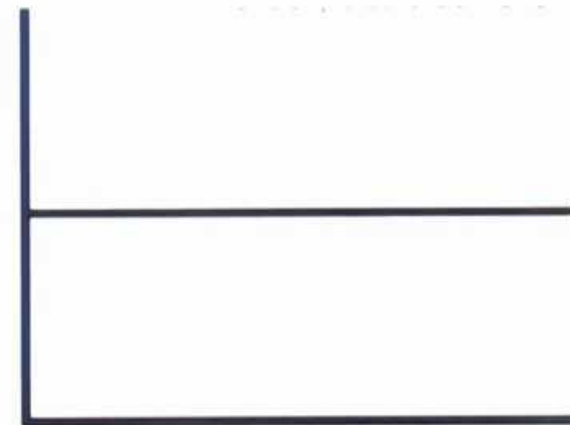


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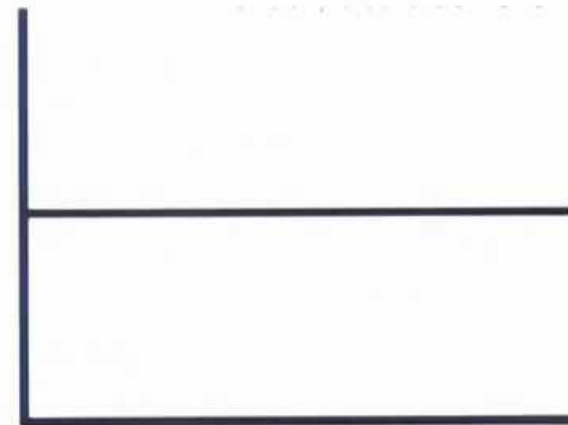


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A	5	0
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C	5	2
D	5	3
E	5	4



provide  
Goods which Zero Satisfaction

comb.	Tomato	meat
A	<u>3</u> 10utils	<u>0</u> → 10utils
B	<u>3</u> 10utils	<u>1</u> zero → 10utils
C	<u>3</u> 10utils	<u>2</u> zero → 10utils
D	<u>3</u> 10utils	<u>3</u> zero → 10utils
E	<u>3</u> 10utils	<u>4</u> zero → 10utils

