


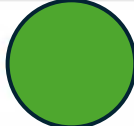
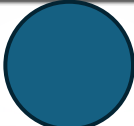
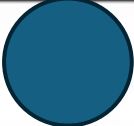
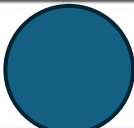


Market Making

Order Book

- A dynamic to record Bid and Ask offers.

Order Book A

Bid	Price	Ask
	100.4	
	100.3	
	100.2	
	100.1	
	100	
	99.9	
	99.8	
	99.7	

Order Book


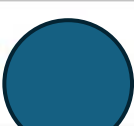
- **Transaction Rules:**

1. When Highest Bid \geq Lowest Ask
2. Pair up with best deal (largest gap)
3. The later offer = New Price

- **Example A:**

- Blue buy 1 unit at 100.3
 - Green sell 1 unit at 100.3
 - Price become 100.3
-

Order Book A

Bid	Price	Ask
	100.4	
	100.3	
	100.2	
	100.1	
	100	
	99.9	
	99.8	
	99.7	

Order Book


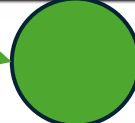

- **Transaction Rules:**

1. When Highest Bid \geq Lowest Ask
2. Pair up with best deal (largest gap)
3. The later offer = New Price

- **Example B:**

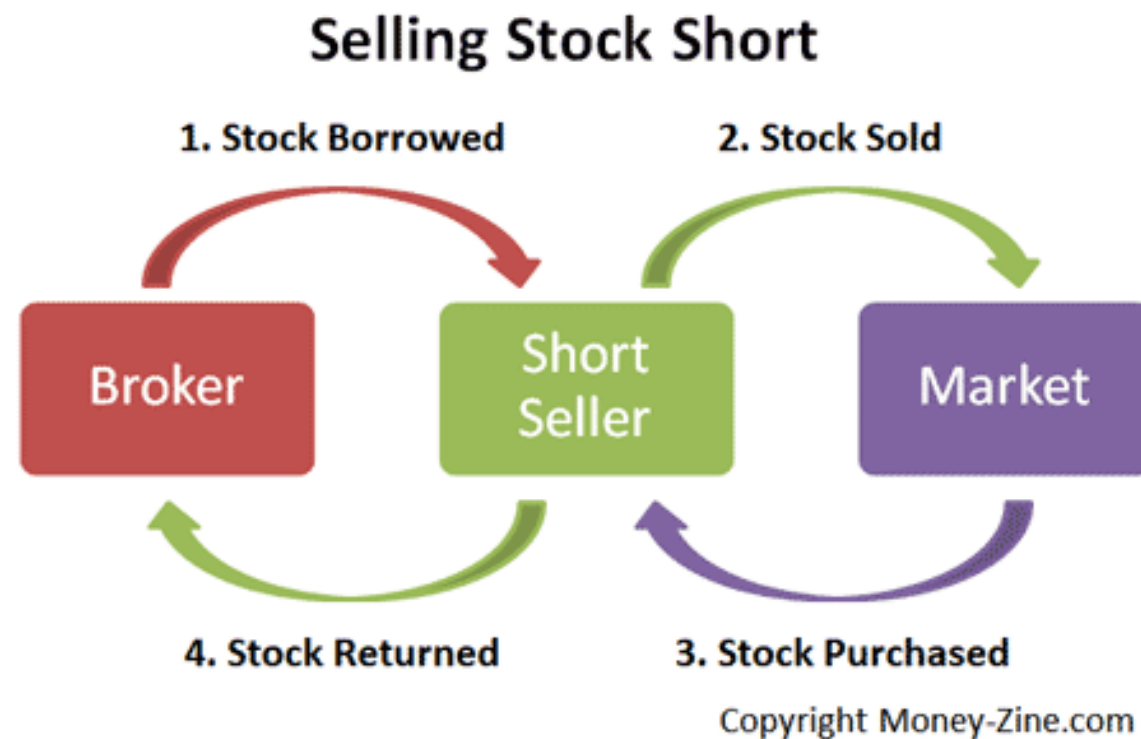
- Green sell 1 unit at 99.8
 - Blue buy 1 unit at 99.8
 - Price become 99.8
-

Order Book A

Bid	Price	Ask
	100.4	
	100.3	
	100.2	
	100.1	
	100	
	99.9	
	99.8	
	99.7	

Position 倉位

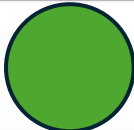
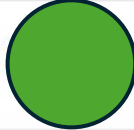
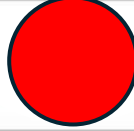
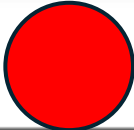

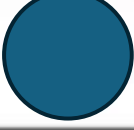
- 買一張/口: Position + 1
- 賣一張/口: Position - 1
- 允許賣空: Position < 0
- 強制平倉: 自動賣/買給系統
 - Price * Position



Market Maker

- **MM:** Try to offer the Highest Bid and Lowest Ask
-

Order Book A

Bid	Price	Ask
	100.4	
	100.3	
	100.2	
	100.1	
	100	
	99.9	
	99.8	
	99.7	

Market Maker

- **Transaction Rules:**




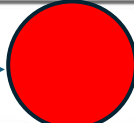
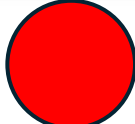


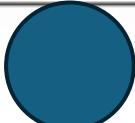

1. When Highest Bid \geq Lowest Ask
2. Pair up with best deal (largest gap)
3. The later offer = New Price

- **Example C:**

- Blue buy 1 unit at 100.2
- Red sold 1 unit at 100.2
- Price become 100.2
- Green sold 1 unit at 100
- Red buy 1 unit at 100
- Price become 100

Red earn 0.2

Order Book A

Bid	Price	Ask
	100.4	
	100.3	
	100.2	
	100.1	
	100	
	99.9	
	99.8	
	99.7	

Our system – User 1 page

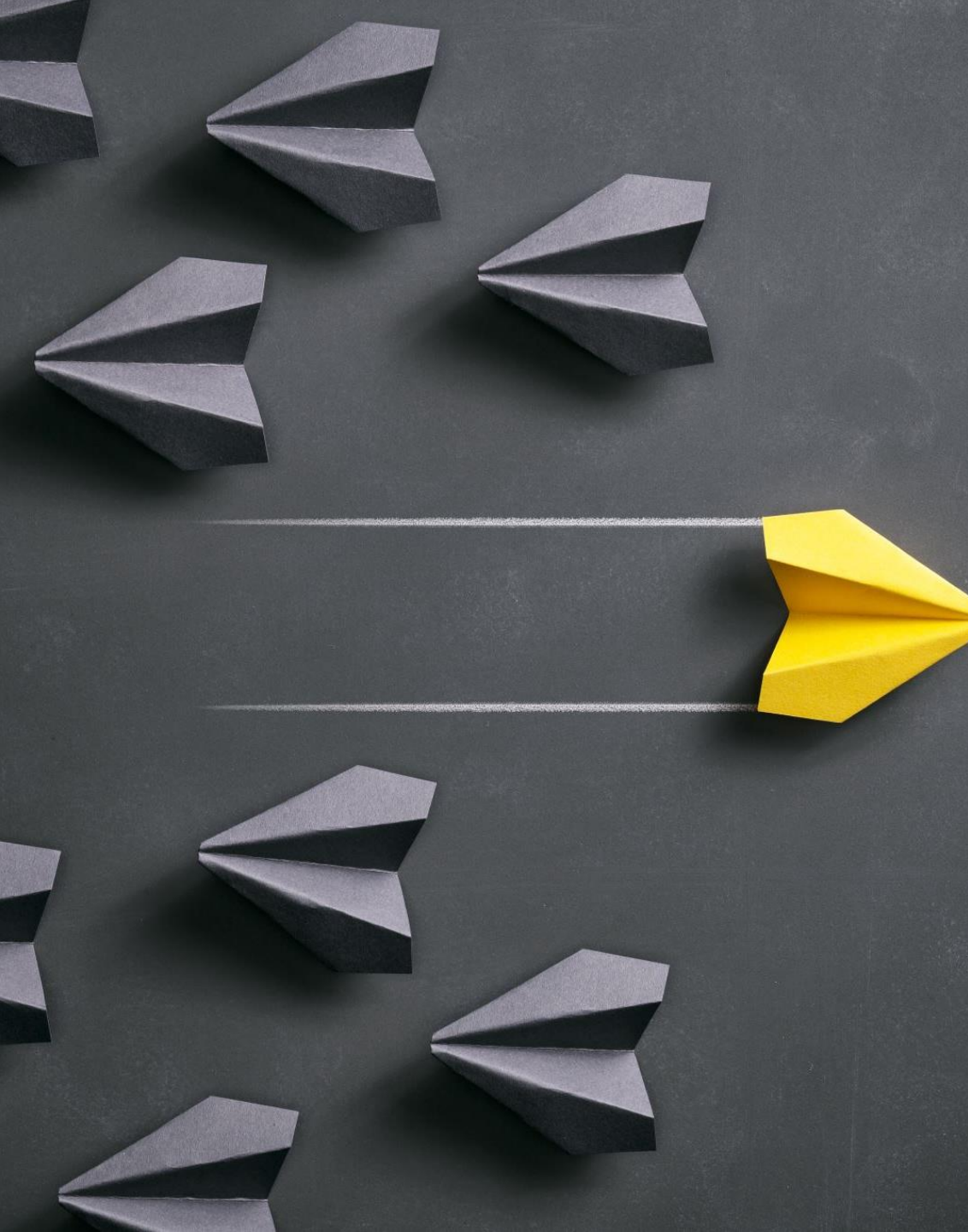
	A	B	C	D	E	F	G	H	I
	Bid	Ask	Check	Last Submitted:	83	115	190	1	
1									
2	100	110	TRUE						
3	100	104	TRUE						
4	100	101	TRUE						
5	100	101	TRUE						
6	99	101	TRUE						
7	99	101	TRUE						
8	100	105	TRUE						
9	100	104	TRUE						
10	100	104	TRUE						
11	100	104	TRUE						
12	100	105	TRUE						
13	100	105	TRUE						
14	100	105	TRUE						
15	100	105	TRUE						
16	100	105	TRUE						
17	100	105	TRUE						
18	100	104	TRUE						
19	100	105	TRUE						
20	100	105	TRUE						
21	100	105	TRUE						
22	101	103	TRUE						
23	101	110	TRUE						

Our system – Home page

[illegible]



Game Rules



Banned Behavior

- 1. 只能輸入整數 $[0, 1000000]$
 - 2. 禁止拖曳複製
 - 3. 禁止輸入公式
-
- 黃牌警告
 - 紅牌出場

Profit and Loss (P/L) Calculation Overview

- Current P/L = 錢包有多少錢
- Position = 持有多少部位(股/台)
- End Price = 每輪結算價格
- Net P/L = Current P/L + Position * End Price = 每輪得分

Details about each round

<i>Round</i>	<i>End Price</i>	<i>Information</i>
• 1:	Daily Closed Price	None
• 2:	Daily Closed Price	None/ Initial Order Book
*Announce the hint for Maturity Spot Price		
• 3:	Maturity Spot Price	Hint

Profit and Loss (P/L) Calculation

- Current P/L =
 - $(\text{Sell}_1 + \text{Sell}_2 + \dots) - (\text{Buy}_1 + \text{Buy}_2 + \dots)$
- Position =
 - Number of Buy – Number of Sell
- End Price =
 - (1st and 2nd round): Daily Closed Price – no one know
 - (3rd round): Maturity Spot Price – we won't tell you
- Net P/L = Current P/L + Position * End Price

2 ways to make profit



MM



SPECULATION

Our system – Scoreboard page

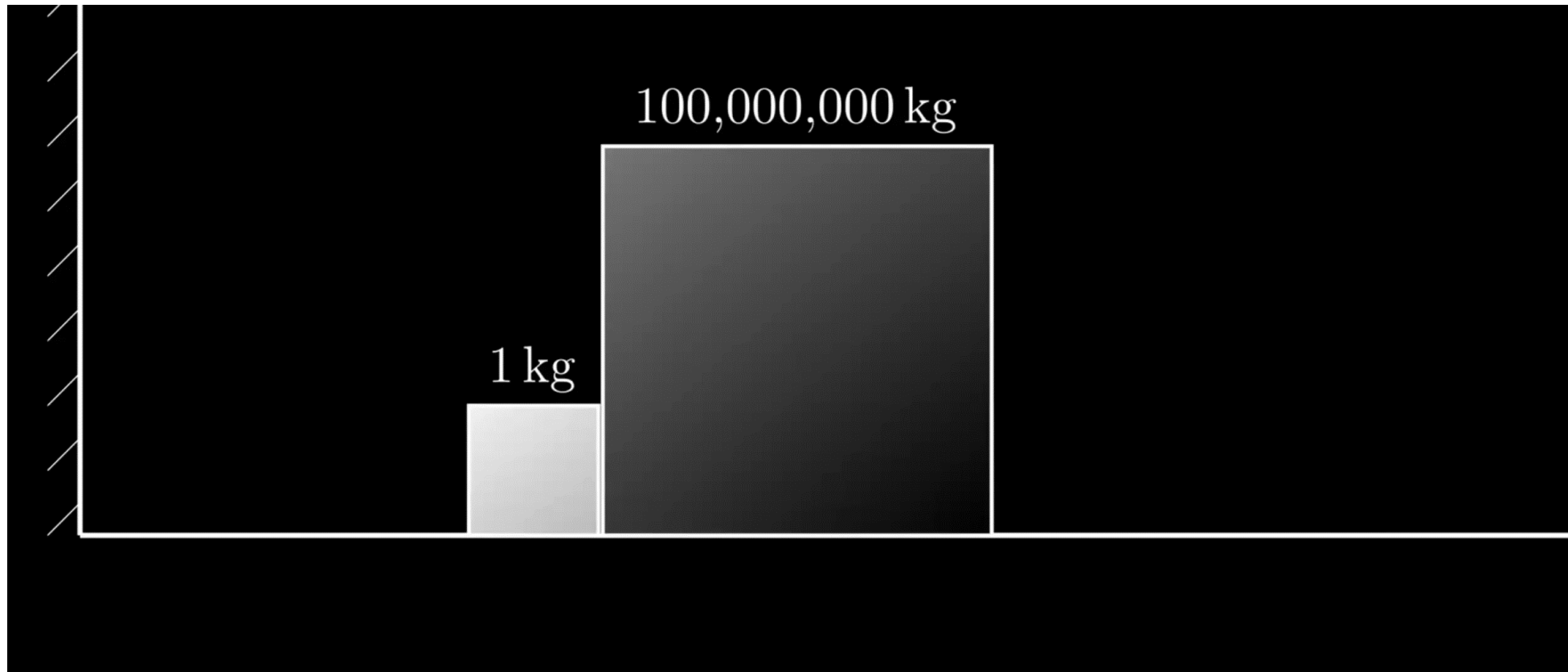
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD																							
1	Round		Price			Order Book			Scoreboard																																												
2	0		Type	Value		Bid	Ask		Player	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Sum																							
3	Intraday Trading		Futures (Current)	980		885	898		Current P/L	2845	-9287	-2519	4098	-4692	8092	2458	0	0	0	0	0	0	0	0	0	0	0	0	0	-995	0																						
4						884	898		Current Position	-6	10	1	-5	1	2	-9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0																				
5						883	898		Net Current P/L	-3035	513	-1539	-802	-3712	10052	-6362	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4885	0																				
6	Expiration Settlement		Daily Closed	Unknown		883	898		Net Day Trade P/L	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####																					
7					Maturity Spot	See Hint		882	898		Net Maturity P/L	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####																			
8								882	898		Order Book										Profit and Loss																																
9						881	899																																														
10					881	899																																															
11					881	899																																															
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18					878	900																																															

Profit and Loss Bound of each round

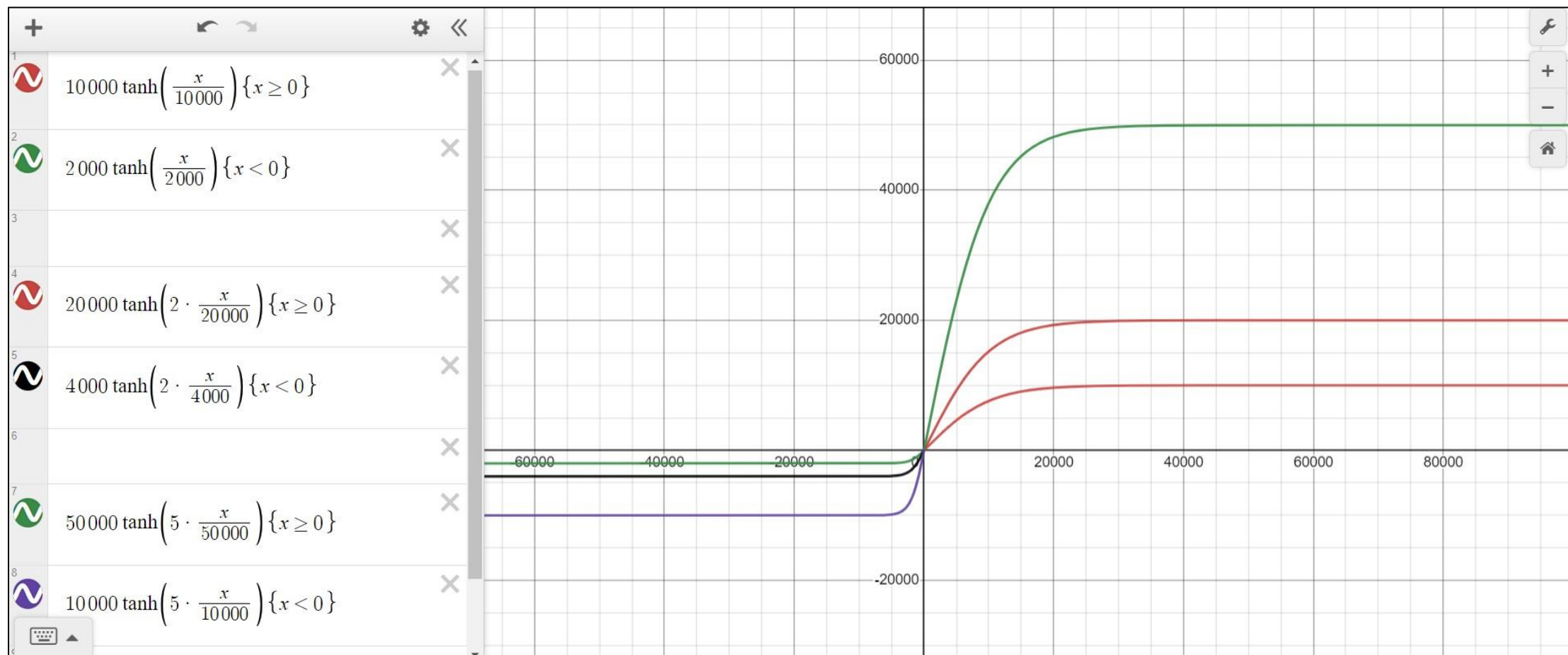
<i>Round</i>	<i>End Price</i>	<i>Information</i>
• 1:	Daily Closed Price	None
• 2:	Daily Closed Price	None/ Initial Order Book
*Announce the hint for Maturity Spot Price		
• 3:	Maturity Spot Price	Hint

3rd round end price **hint**

- Maturity Spot Price = 2nd round end price + N (number of collisions)



貨幣換算



*領支票換籌碼