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Cboe Global Markets

Options Deep Dive: Mastering Volatility and Trading Strategies

Foundations of Options Trading: A Beginner's Guide

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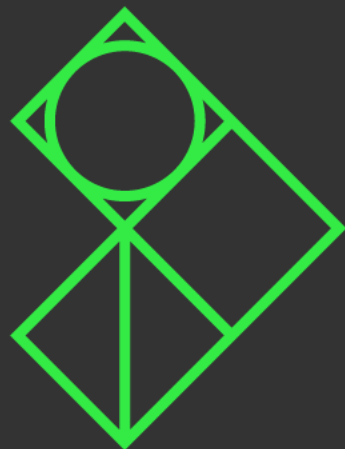
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The Options Institute

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CIO, Rho Investments

Jose Mosquera is Chief Investment Officer at RHO Investments, an innovative multi-strategy hedge fund based in Madrid and part of the asset management firm Quadriga Asset Managers. Jose has over 28 years of experience in fund management, proprietary trading, and market-making across equities, interest rates, and credit markets—both in cash instruments and derivatives.

Prior to returning to Spain to join Quadriga, Jose held several director-level position in London leading trading teams at prominent financial institutions such as Barclays Capital, UBS, and HSBC.

Jose holds a Master's degree in Finance (MSc in International Securities, Investment and Banking) awarded in 1997 by the ICMA Centre at Henley Business School (UK).

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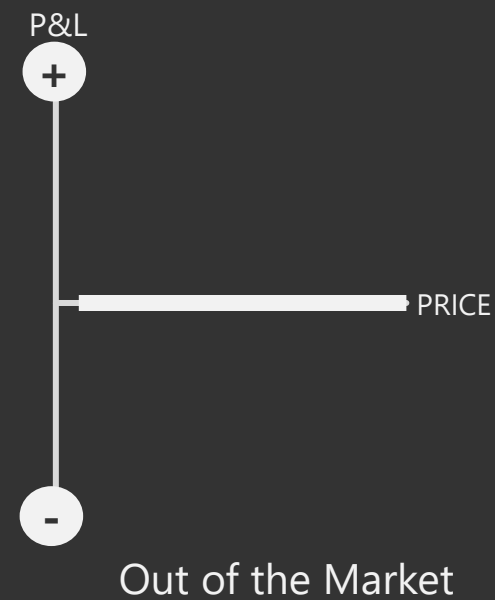
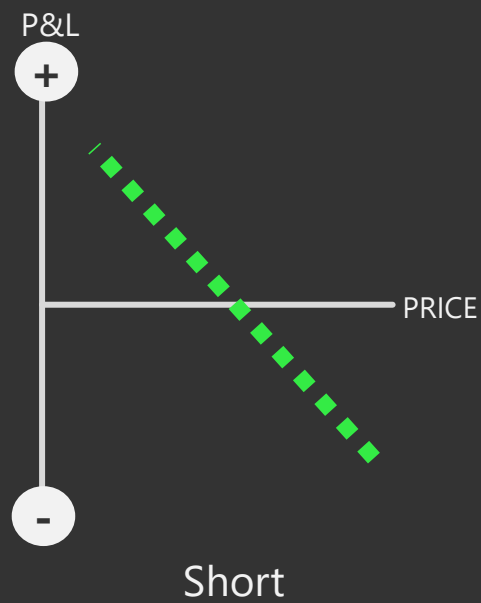
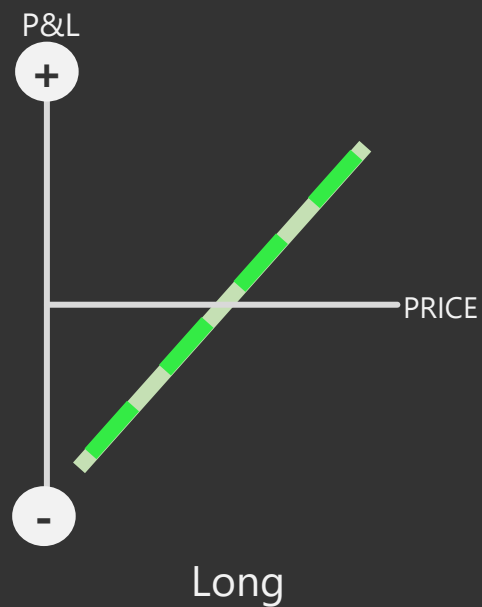
Options Deep Dive: Mastering Volatility
and Trading Strategies

Foundations of Options Trading: A Beginner's Guide

Learning Objectives

- Define options and common terms in options trading.
- Illustrate examples of call and put options on underlying assets (individual stocks, stock indices) and their payoffs at expiration.

What are your investment choices in a world without derivatives?





Why do investors utilize options?



Why use options?

1. **Income Generation**
2. **Capital Protection**
3. **Risk Management** (hedging)
4. **Efficient Exposure**
5. **Managing Cashflows**

NOTE:

It's important to mention that options, like all financial products, involve risk (e.g. the risk of losing the invested capital or premium) and are not suitable for all investors. Past performance does not guarantee future results.

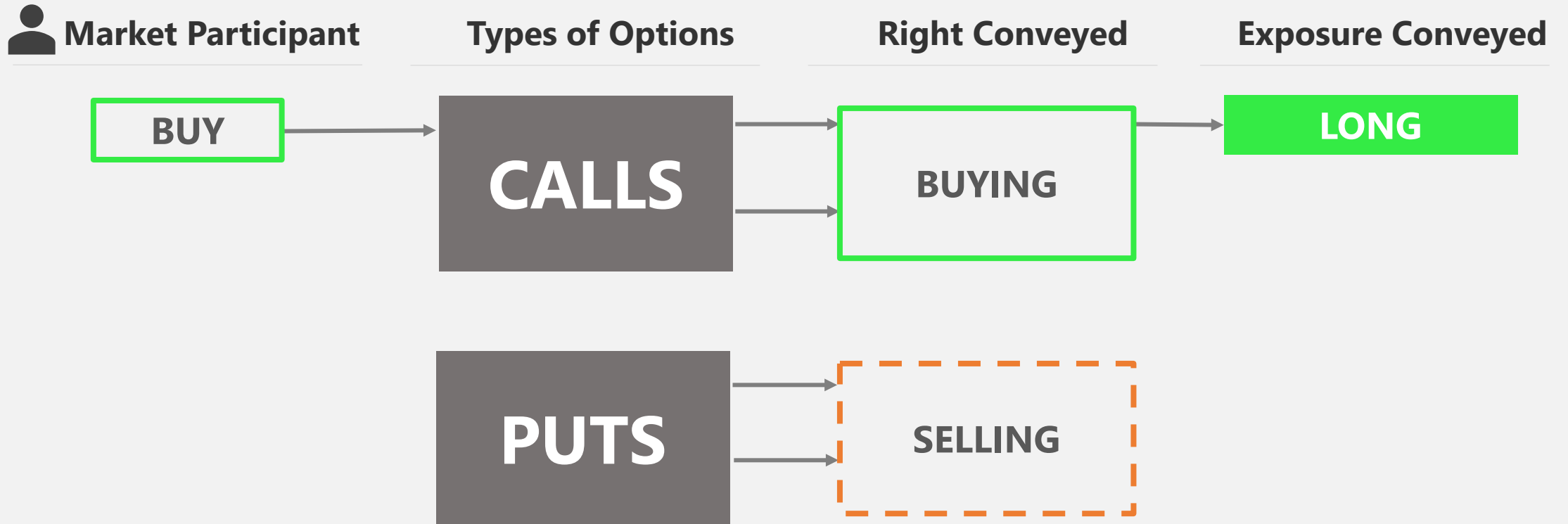
What is an option?

A financial contract that conveys to the owner the ***right, but not the obligation***, to buy or sell (depending on type) the underlying asset at a ***specific price*** within a ***specific timeframe***.

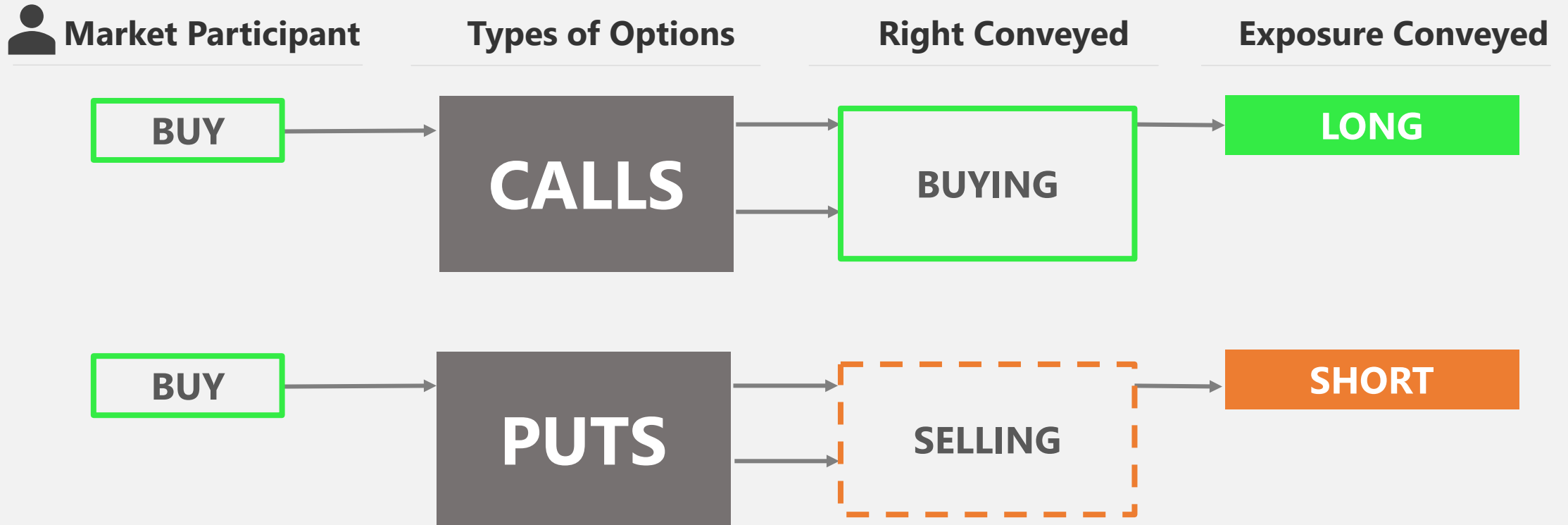
Brief History of Options

- **Thales of Miletus (4th century BC) paid for the use of olive presses**
- **Tulip Mania (17th century, Netherlands); rice options in Japan (18th century); Dojima Rice Market in Osaka; OTC options in the U.S. and U.K. (19th century)**
- **Standardized contract. CBOE, April 26, 1973: options on stocks of 16 companies are launched**
 - Fungibility
 - Counterparty risk inherent to OTC contracts is eliminated (via OCC)"

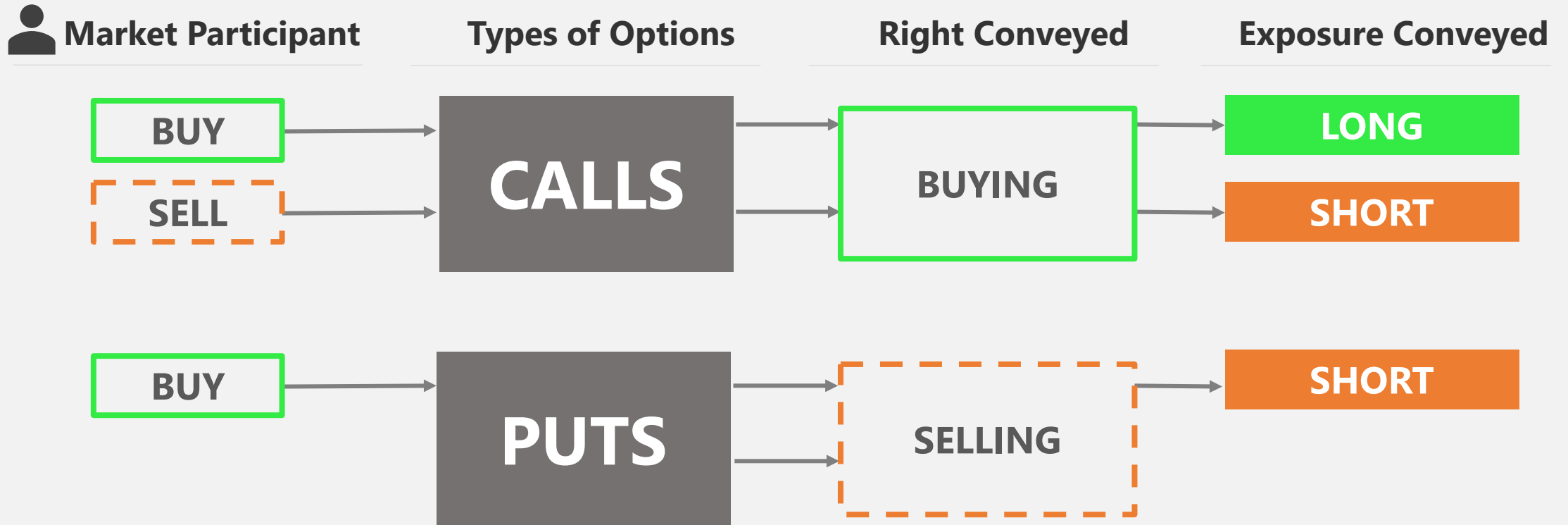
Building blocks of choice and flexibility.



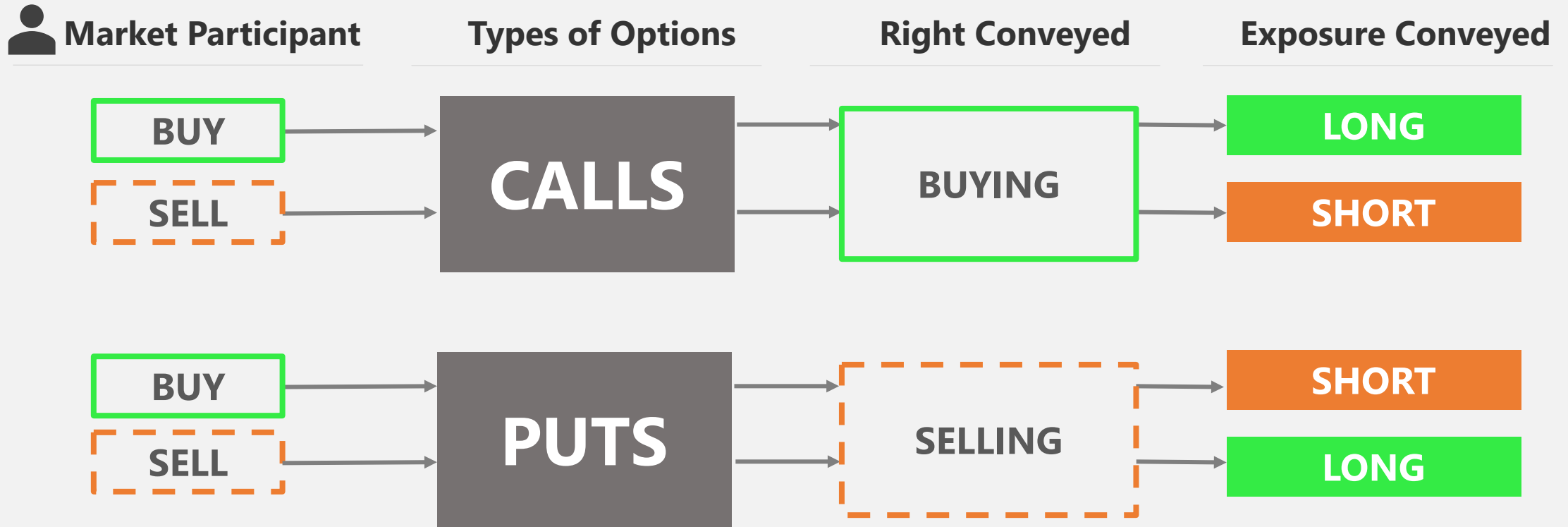
Building blocks of choice and flexibility.



Building blocks of choice and flexibility.



Building blocks of choice and flexibility.



Q & A



THE LANGUAGE OF OPTIONS

ANALYSIS | XYZ US EQUITY — OPTIONS CHAIN [OPCH]

28-Apr-2026 15:43 ET LIVE

LAST: 148.72 CHG: ▼-2.34(-1.55%) BID: 148.70 ASK: 148.74 VOL: 4,821,300 52W H: 187.45 52W L: 121.08 IV RNK: 71 HV30: 28.4%

16-May-2026 DTE:18

Jun Jul Sep Dec LEAPS

◀ CALLS							STRIKE	PUTS ▶					
OI	VOL	DELTA	BID	ASK	IV%	LAST	STRIKE	LAST	IV%	BID	ASK	DELTA	OI
3,241	812	0.91	23.40	23.60	31.2%	23.50	120	0.08	33.1%	0.07	0.09	-0.09	892
4,108	943	0.86	18.90	19.10	30.8%	19.00	125	0.14	32.7%	0.13	0.15	-0.13	1,204
5,872	1,341	0.80	14.60	14.80	30.1%	14.70	130	0.28	31.9%	0.27	0.30	-0.20	2,341
6,210	2,104	0.72	10.70	10.90	29.6%	10.80	135	0.55	31.2%	0.53	0.57	-0.29	3,108
8,341	3,822	0.63	7.40	7.60	29.1%	7.50	140	1.05	30.8%	1.03	1.08	-0.38	4,210
11,204	5,931	0.53	4.70	4.90	28.7%	4.80	145	2.10	30.1%	2.08	2.13	-0.48	6,341
14,872	8,204	0.44	2.75	2.85	28.4%	2.80	150 ATM	3.90	29.8%	3.85	3.95	-0.57	9,104
9,341	4,108	0.34	1.45	1.55	28.9%	1.50	155	6.20	30.2%	6.15	6.30	-0.66	7,832
7,204	2,341	0.25	0.68	0.74	29.4%	0.71	160	9.30	30.9%	9.25	9.40	-0.75	5,210
4,108	1,204	0.17	0.28	0.34	30.1%	0.31	165	13.10	31.6%	13.05	13.20	-0.83	3,108
2,341	841	0.10	0.10	0.14	30.9%	0.12	170	17.40	32.4%	17.30	17.50	-0.89	1,841
1,204	412	0.05	0.03	0.06	31.8%	0.04	175	22.10	33.2%	22.00	22.20	-0.94	1,024

DTE: 18 IV RANK: 71 (Elevated) HV30: 28.4% P/C RATIO: 0.87 TOTAL OI: 112,340 PUT SKEW: +2.1 TERM: CONTANGO

[OMON] Options Monitor [OVML] Vol Matrix [GP] Graph [OSA] Scenario [RV] Rel Value [HIVG] Vol Surface <GO>

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THE LANGUAGE OF OPTIONS

XYZ US 12/19/25 C150 Equity		Last 148.72	CHG -2.34 (-1.55%)	Bid 148.70	Ask 148.74	Vol 4,821,300
XYZ US 12/19/25 C150 Equity Option Description 28-Apr-2026 15:43 ET LIVE						
Underlying XYZ Corporation		1) Detail DES >> Ticker XYZ US Equity Price 148.72				
Contract Information		2) Option Chain OMON >>				
Ticker	XYZ US 12/19/25 C150	Ticker	Exp Date	DExp	Csize	Mult
Bid/Ask	2.75 / 2.85	1. XYZA	15-Aug-2025	1	100	100
Last	2.80	2. XYZB	15-Aug-2025	1	100	100
Strike	150.0	3. XYZ	15-Aug-2025	1	100	100
Expiration	19-Dec-2025	4. XYZC	15-Aug-2025	1	100	100
Exercise	American	5. XYZD	15-Aug-2025	1	100	100
Csize/Multiplier	100/100	6. XYZE	15-Aug-2025	1	100	100
Exchange Data		7. XYZ4	22-Aug-2025	8	100	100
Exch	CBOE (Cboe Options)	8. 4XYZ	22-Aug-2025	8	100	100
Hours	9:30 - 16:00 ET	9. 4XYZE	22-Aug-2025	8	100	100
In	Chicago	10. XYZ5	29-Aug-2025	15	100	100
Tick Size	0.01 0.01	11. 5XYZ	29-Aug-2025	15	100	100
Tick Val	USD 1.00 USD 1.00	12. 5XYZE	29-Aug-2025	15	100	100
Pos Limit	25,000	13. XYZR1	05-Sep-2025	22	100	100
Identifiers		3) Volatility Analysis GIV >>				
FIGI	BBG0XYZABC12	30D	29.611	IVol	26.081	Vega
ISIN	US0XYZOPT150	60D	28.009	Delta	0.431	Theta
		90D	30.210	Gamma	0.026	Rho
		4) Option Price GP >>				

XYZ US 12/19/25 C150 Equity 2.80

2025

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THE LANGUAGE OF OPTIONS

Sell 1 XYZ Nov 115 C at 15.50

THE LANGUAGE OF OPTIONS

SIDE

Sell 1 XYZ Nov 115 C at 15.50

THE LANGUAGE OF OPTIONS

SIDE

QUANTITY

Sell

1

XYZ

Nov

115

C

at

15.50

THE LANGUAGE OF OPTIONS

SIDE

QUANTITY

UNDERLYING

Sell

1

XYZ

Nov

115

C

at

15.50

THE LANGUAGE OF OPTIONS

SIDE

QUANTITY

UNDERLYING

EXPIRY

Sell

1

XYZ

Nov

115

C

at

15.50

THE LANGUAGE OF OPTIONS

SIDE	QUANTITY	UNDERLYING	EXPIRY	STRIKE			
Sell	1	XYZ	Nov	115	C	at	15.50

THE LANGUAGE OF OPTIONS

SIDE	QUANTITY	UNDERLYING	EXPIRY	STRIKE	TYPE		
Sell	1	XYZ	Nov	115	C	at	15.50

THE LANGUAGE OF OPTIONS

SIDE	QUANTITY	UNDERLYING	EXPIRY	STRIKE	TYPE	PRICE
Sell	1	XYZ	Nov	115	C	at 15.50

THE LANGUAGE OF OPTIONS

SIDE	QUANTITY	UNDERLYING	EXPIRY	STRIKE	TYPE		PRICE
Sell	1	XYZ	Nov	115	C	at	15.50

"Sell one XYZ November 115 Call at \$15.50"

THE LANGUAGE OF OPTIONS

SIDE	QUANTITY	UNDERLYING	EXPIRY	STRIKE	TYPE		PRICE
Sell	1	XYZ	Nov	115	C	at	15.50

"Sell one XYZ November 115 Call at \$15.50"

SIDE	QUANTITY	UNDERLYING	EXPIRY	STRIKE	TYPE		PRICE
Buy	3	XYZ	Nov	120	P	for	10.60

"Pay 10.60 for three XYZ November 120 Puts"

THE LANGUAGE OF OPTIONS

Exercise

Settlement

THE LANGUAGE OF OPTIONS

Exercise

American Options – May be exercised **any time before or on** the expiration date

EQUITY & ETF OPTIONS

European Options – Can only be exercised **on** the expiration date

INDEX OPTIONS

Settlement

What impact does exercise style have on the price of an option? Why?

THE LANGUAGE OF OPTIONS

Exercise

American Options – May be exercised **any time before or on** the expiration date

EQUITY & ETF OPTIONS

European Options – Can only be exercised **on** the expiration date

INDEX OPTIONS

Settlement

Physical Settlement – The underlying security or asset changes hands and a payment occurs equal to the amount of the strike price (K)

Cash Settlement – A cash payment of the difference between the strike (K) and the settlement value

What are the pros and cons for each settlement type?

THE LANGUAGE OF OPTIONS

#

Quantity

THE LANGUAGE OF OPTIONS

#

Quantity

The number of option contracts
(calls or puts) you buy or sell.

THE LANGUAGE OF OPTIONS

#

Quantity

The number of option contracts (calls or puts) you buy or sell.

X

Contract Size

(a.k.a. Multiplier)

The amount of underlying asset that one derivatives contract controls.

*Equity options are standardized at **100 shares** per contract.*

THE LANGUAGE OF OPTIONS

#

Quantity

The number of option contracts (calls or puts) you buy or sell.

X

Contract Size

(a.k.a. Multiplier)

The amount of underlying asset that one derivatives contract controls.

*Equity options are standardized at **100 shares** per contract.*

Total Premium = QUANTITY x CONTRACT MULTIPLIER x **PRICE** (or level)

Notional Value = QUANTITY x CONTRACT MULTIPLIER x **STRIKE PRICE**

THE LANGUAGE OF OPTIONS

Leverage

SIDE	QUANTITY	UNDERLYING	EXPIRY	STRIKE	TYPE	PRICE
Buy	3	XYZ	Nov	120	P	for 10.60

"Pay 10.60 for three XYZ November 120 Puts"

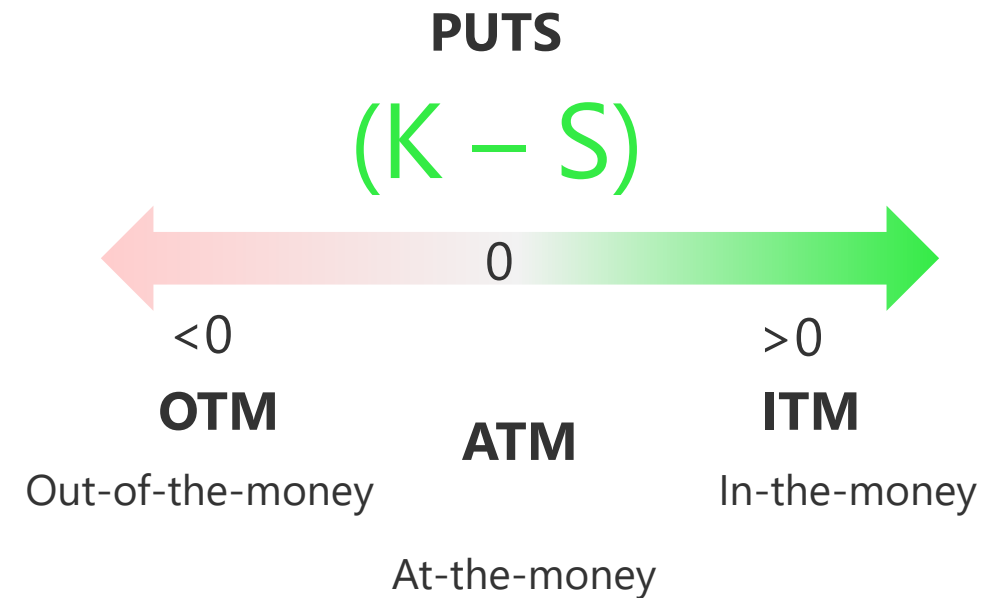
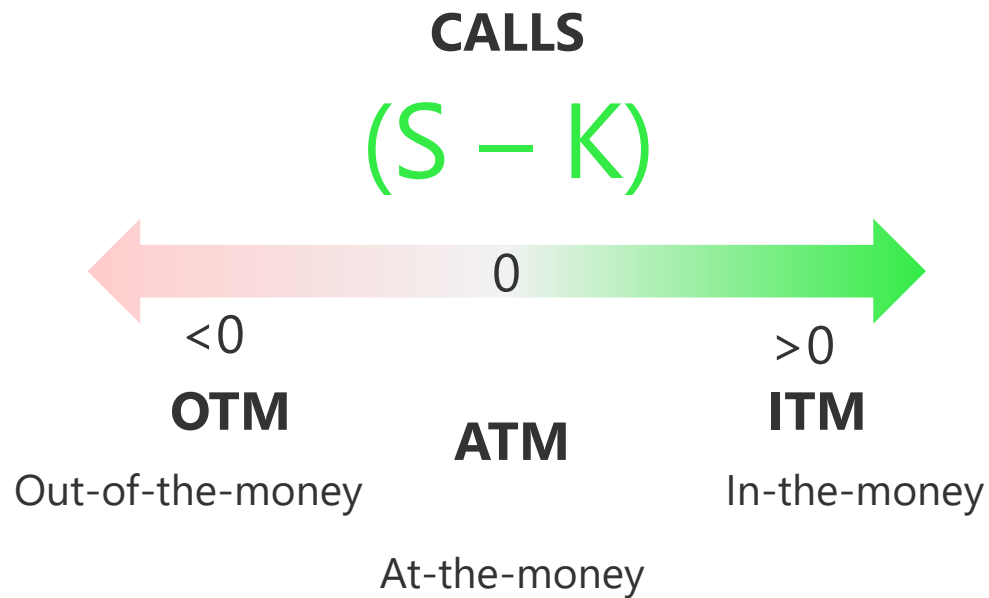
Total Premium = $3 \times 100 \times 10.60 = \$3,180$

Notional Value = $3 \times 100 \times 120 = \$36,000$

THE LANGUAGE OF OPTIONS

Moneyness

Describes the intrinsic value of an option at its current state. It's an indicator as to whether the option would make money if it was exercised immediately.



Q & A



Call Options

The right, but not the obligation, to **BUY** a stock, bond, commodity or other asset or instrument at a specified price (strike = K) within a specific time period (expiry).

EXAMPLE

Coupon Price = Premium = \$1.00

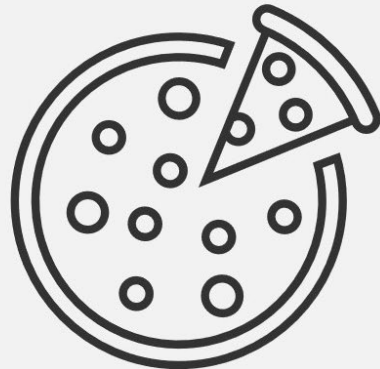
PIZZA COUPON

\$14.00

Coupon good for

1 Pepperoni Pizza
(Regular Price \$15.00)

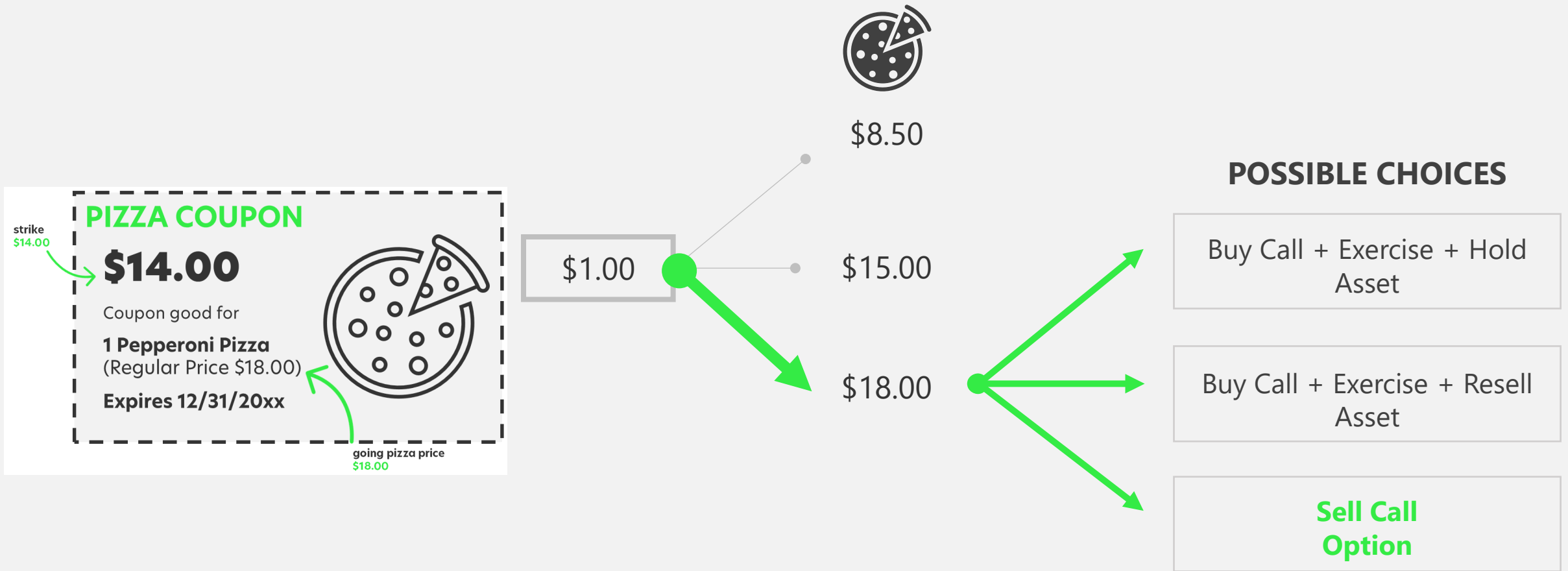
Expires 12/31/20xx



Option Contract Terms	Coupon Value
Strike	14
Underlying	\$15
Quantity	1
Contract Multiplier	1
Expiry	December 31

Call Options

The right, but not the obligation, to **BUY** a stock, bond, commodity or other asset or instrument at a specified price (strike = K) within a specific time period (expiry).

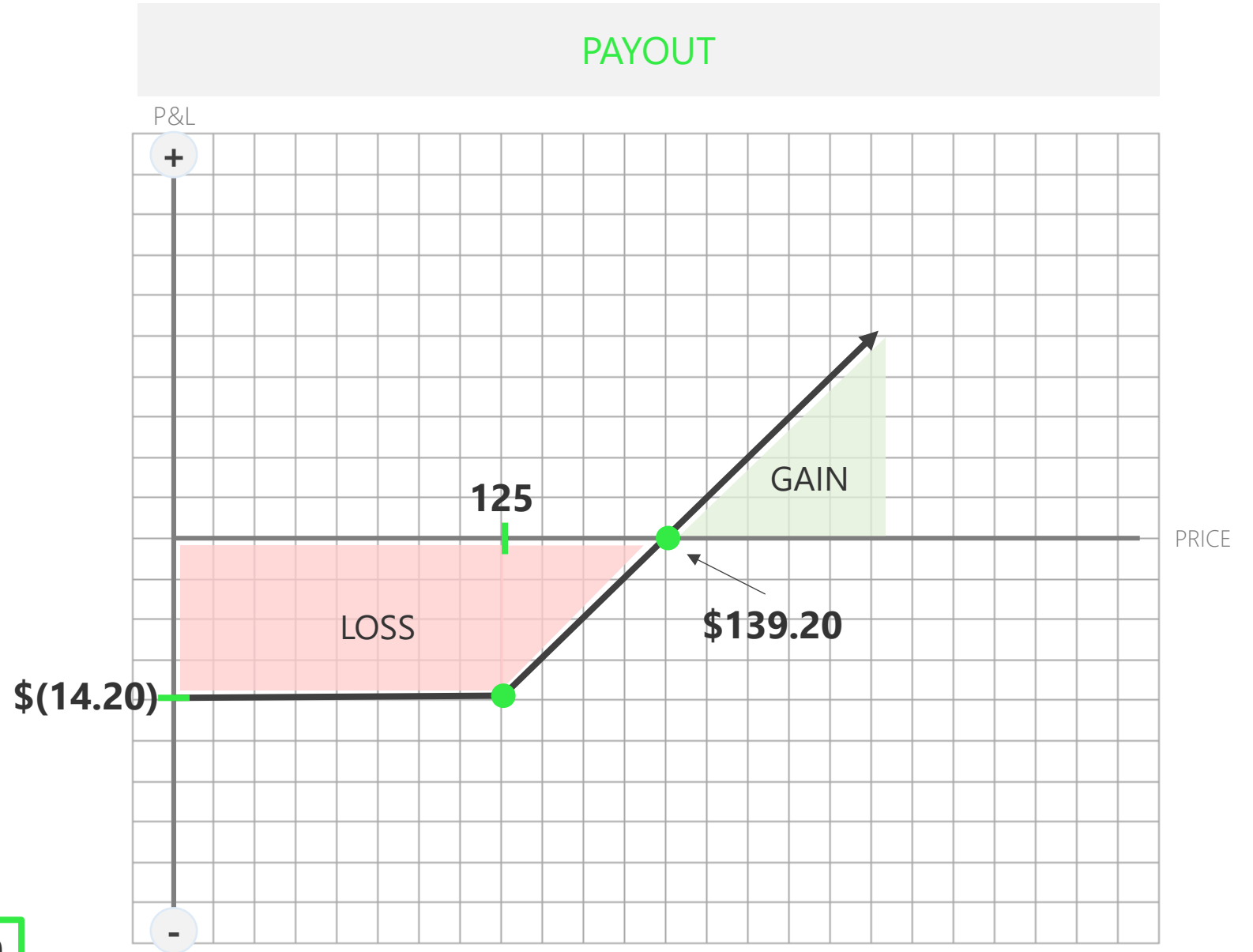


CALL OPTIONS

Example

Stock Ticker	XYZ
Stock Price (\$)	\$122.53
Side	Buyer
Expiry	December
Strike (K)	125
Type	Call
Interest	0
Dividend	0
Premium (P)	\$14.20

What is the break-even price? 139.20



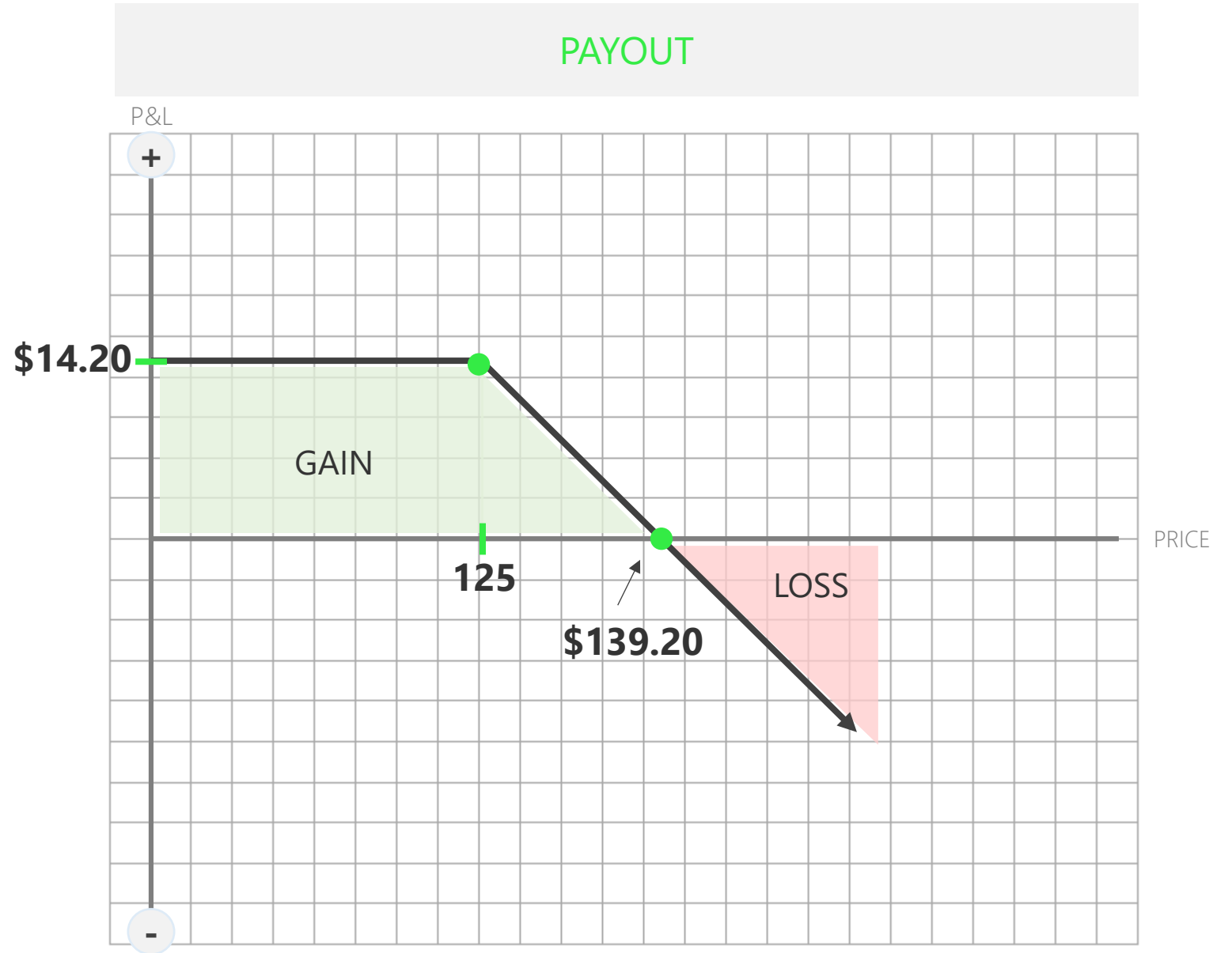
CALL OPTIONS

Example

Stock Ticker	XYZ
Stock Price (\$)	\$122.53
Side	Seller
Expiry	December
Strike (K)	125
Type	Call
Interest	0
Dividend	0
Premium (P)	\$14.20



What is the break-even price?

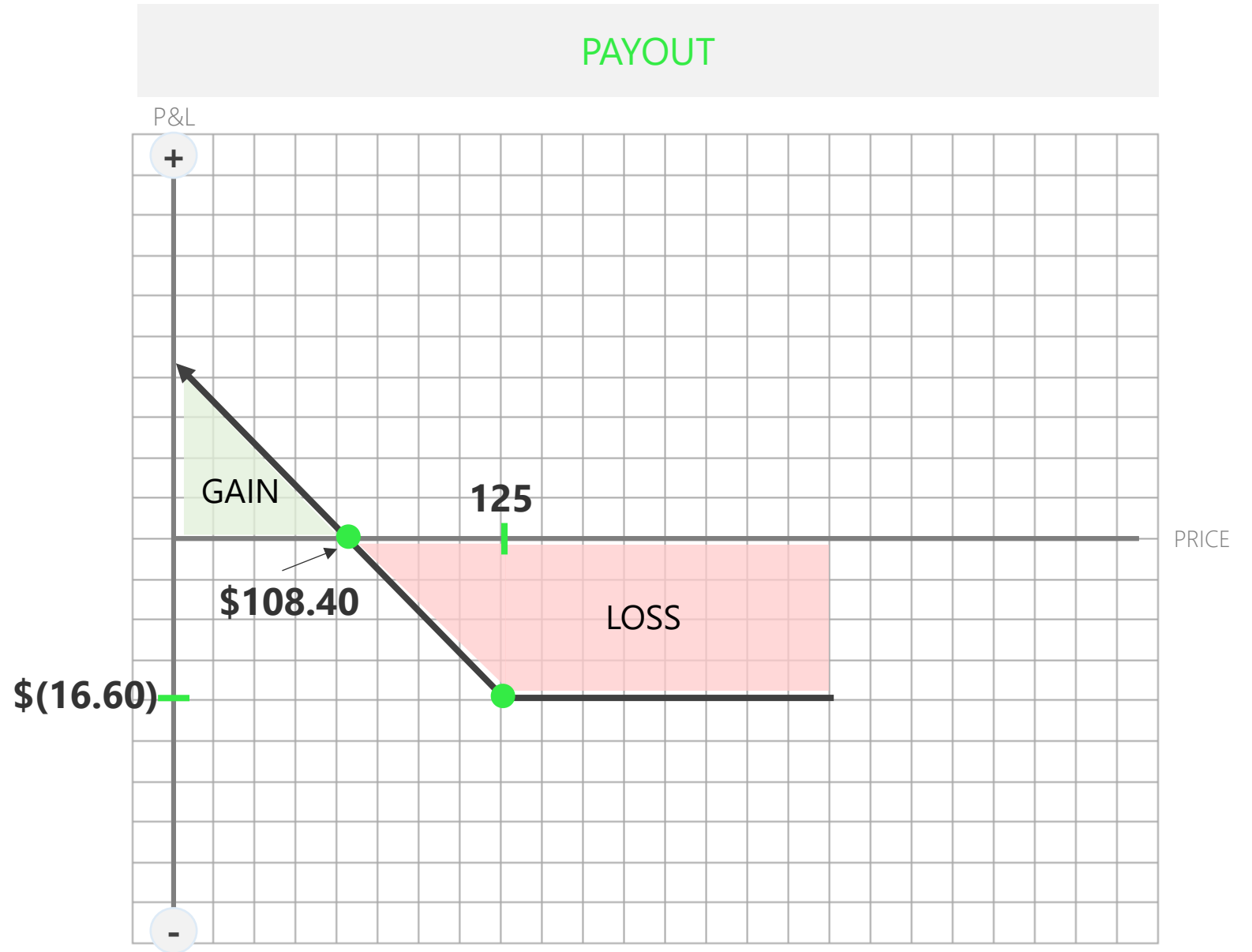


PUT OPTIONS

Example

Stock Ticker	XYZ
Stock Price (\$)	\$122.53
Side	Buyer
Expiry	December
Strike (K)	125
Type	Put
Interest	0
Dividend	0
Premium (P)	\$16.60

What is the break-even price?



Q & A



Thank you!



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