

# Options cheatsheet

## Options Greeks Cheat Sheet

### Implied Volatility (IV)

**What it is:** The market's expectation of how much the stock price will move over the next year, expressed as a percentage.

Value	What it means
0-20%	Low volatility — stock expected to be calm
20-50%	Normal range for most stocks
50-80%	High volatility — big moves expected
80%+	Extreme volatility — options are expensive

“ **Your WD put:** IV = 93% → Market expects massive swings. Options are pricey.

### Delta ( $\Delta$ )

**What it is:** How much the option's price moves when the stock moves **\$1**.

Value	What it means
0.00 to +1.00	Calls — rises when stock rises
0.00 to -1.00	Puts — falls when stock rises
$\pm 0.50$	Roughly 50/50 chance of expiring in the money
$\pm 0.80-1.00$	Deep in the money — moves almost like the stock
$\pm 0.01-0.10$	Far out of the money — very unlikely to profit

**Your WD put:** Delta =  $-0.0805$  → For every \$1 WD rises, your put loses ~\$0.08. For every \$1 WD falls, your put gains ~\$0.08.

## Gamma ( $\Gamma$ )

**What it is:** How much **delta itself changes** when the stock moves \$1. Think of it as delta's sensitivity.

Value	What it means
High (0.05+)	Delta changes rapidly — option is very sensitive to price moves
Low (0.001–0.005)	Delta barely changes with price moves
Near expiration	Gamma spikes dramatically

“**Your WD put:** Gamma = 0.0002 → If WD drops \$1, delta moves from  $-0.0805$  to about  $-0.0807$ . Very small — you're far out of the money.

## Theta ( $\Theta$ )

**What it is:** How much value the option **loses each day** just from time passing, assuming the stock price stays flat. Always negative for buyers.

Value	What it means
$-0.01$ to $-0.05$	Slow decay — often far from expiration
$-0.05$ to $-0.20$	Moderate decay
$-0.20+$	Fast decay — usually near expiration or high IV

“**Your WD put:** Theta =  $-0.1049$  → You lose ~\$10.49 per day ( $\times 100$  shares per contract) just from time passing. Over 30 days = ~\$314 lost to time decay alone.

# Vega ( $v$ )

**What it is:** How much the option's price changes when **IV moves 1%**.

Value	What it means
High (0.50+)	Very sensitive to volatility changes
Low (0.01–0.10)	Less affected by volatility shifts
Long options	You benefit when IV rises
Short options	You benefit when IV falls

“ **Example:** If your option has a Vega of 0.30 and IV jumps from 93% to 94%, the option gains \$0.30 in value ( $\times 100 = \$30$  per contract).

# Rho ( $\rho$ )

**What it is:** How much the option's price changes when **interest rates move 1%**. Usually the least important Greek for short-term traders.

Value	What it means
Positive (calls)	Rising rates slightly increase call value
Negative (puts)	Rising rates slightly decrease put value
Near zero	Short-dated options barely affected

## Quick Reference: Your WD Put (\$300 Strike, Jan 2028)

Greek	Your Value	Plain English
IV	93%	Market expects huge moves — option is expensive

Greek	Your Value	Plain English
Delta	-0.0805	Gains ~\$8 per contract for every \$1 WD falls
Gamma	0.0002	Delta barely changes — you're far out of the money
Theta	-0.1049	Loses ~\$10.49/day per contract from time alone
Contract cost	\$6,200	\$62 quote × 100 shares

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# Key Concepts to Remember

- **One contract = 100 shares.** Always multiply the quoted price by 100 to get your actual cost.
  - **Out of the money (OTM):** The stock price hasn't reached your strike yet. For puts, this means the stock is *above* your strike price.
  - **In the money (ITM):** Your option has intrinsic value. For puts, this means the stock is *below* your strike.
  - **Time decay accelerates** as expiration approaches — the last 30 days are the fastest decay period.
  - **IV crush:** After major news events (earnings, etc.), IV often drops sharply, taking option prices with it even if the stock moves in your favour.
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