

Options with Nova

A field guide to 0DTE, daily & weekly options, using SPY as our running example



9 short lessons

Worked SPY examples

Mini quizzes + answer key

Cheat sheet

Paper-trading challenge

Made for a curious, sharp mind. You'll learn how options actually work, run the numbers like a pro, and see why the people who last are the ones who take risk seriously.

Educational only. Not financial advice. Every price in this guide is an **illustrative example**, not a live quote. Practice with paper trading; real options accounts require an adult (18+).



Meet your guide: Nova Amari

Data nerd · calm under pressure · will absolutely make you do the math



Nova

Hi! I'm Nova. I love two things: puzzles and patterns. The stock market has plenty of both. Options are one of the most interesting puzzles in it: they mix **price**, **time**, and **probability** into one little contract. By the end of this guide you'll know how to read an option, calculate exactly what you could win or lose, and spot the traps that catch a lot of grown-ups. My motto: "**Run the numbers before you click.**"

How this guide works

- **Nine short lessons**, about a page each. Each one has a **Worked SPY Example** with real-looking numbers and a **Mini Quiz**. The answers are in the key at the back, so try first!
- Our running example is **SPY**, the fund that tracks the S&P 500. We'll mostly pretend **SPY is trading at \$580**.
- Big focus: **short-dated options: ODTE** (expires today), **daily**, and **weekly** expirations. They're fast and exciting, and that's exactly why they need respect.
- At the end: a **paper-trading challenge**, a **one-page cheat sheet**, a **glossary** of every term, and the **answer key**.

⚠ Important: read this once

All prices here (SPY at \$580, a call for \$0.90, and so on) are **made-up illustrative numbers** chosen to make the math clear. Some option prices were estimated with a standard pricing model (Black-Scholes, 15% volatility). They are **not current market quotes**, and real prices will differ. This guide is for learning. It is **not financial advice**. You'll practice with **paper (pretend) money** only. Real options trading needs an adult's account (18+).

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1 Stocks, ETFs & what SPY is

Before options, we need the thing options are about

A **stock** (also called a **share**) is a tiny slice of ownership in a company. Own one share of a company and you own a teeny piece of it. The share price moves all day as buyers and sellers trade it: more eager buyers push the price up, more eager sellers push it down.

An **ETF** (exchange-traded fund) is a **basket** of many stocks packaged into one thing you can buy or sell just like a single stock. Instead of picking one company, you get a little of many at once. That's called **diversification**: if one company has a bad day, it's only a small part of the basket.

The **S&P 500** is an **index**: a scoreboard that tracks about 500 of the largest U.S. companies (think big tech, banks, stores, energy and healthcare companies). You can't buy an index directly. It's just a number. So people built funds that copy it.

SPY (the *SPDR S&P 500 ETF Trust*) is the most famous of those funds. It launched in 1993 as the first U.S.-listed ETF, and it holds the stocks in the S&P 500 so that its price follows the index. A handy rule of thumb: **SPY's price is roughly 1/10 of the S&P 500 level** (not exact, because of fund fees and dividends). SPY is one of the most heavily traded securities on Earth, and **options on SPY** are some of the most actively traded options anywhere. That's why it makes a great example.

Worked SPY Example (illustrative numbers)

Say the S&P 500 is at **5,800**. Using the 1/10 rule, SPY is around **\$580**.

The index rises **1%** during the day $\rightarrow 5,800 \times 1.01 = \mathbf{5,858}$. SPY rises about 1% too $\rightarrow \$580 \times 1.01 \approx \mathbf{\$585.80}$.

If you owned **10 shares** of SPY: $10 \times \$580 = \$5,800 \rightarrow 10 \times \$585.80 = \$5,858$. That's a gain of **+\$58 (+1%)**.

Notice: with shares, a 1% move in the market means about a 1% move in your money. Hold onto that thought. Options will break this rule in a big way.



Nova's tip

"The market" on the news usually means the S&P 500. When someone says "stocks were up 1% today," SPY probably was too. Knowing $\text{SPY} \approx \text{market}$ makes everything in this guide easier to picture.



Why SPY options are popular for short-term trading

SPY has **options that expire every trading day, Monday through Friday**, and huge trading volume. That means lots of buyers and sellers and usually tight prices. That's also exactly what makes it tempting to trade too fast. More on that in Lesson 8.



Mini Quiz 1

1. What index does SPY track, and roughly how many companies are in it?
2. SPY is at \$580 and rises 2%. About what is the new price?
3. Give one reason someone might buy SPY instead of a single company's stock.

2 What's an option? Calls vs. puts

A contract about the *right* to buy or sell, not the obligation

An **option** is a contract that gives the buyer the **right, but not the obligation**, to buy or sell something at a **locked-in price** (the **strike**) until a certain date (the **expiration**). The buyer pays for that right. The price paid is called the **premium**, and it goes to the **seller** (also called the **writer**), who takes on the **obligation**.

CALL = the right to **BUY** at the strike. Calls get more valuable when the price goes **up**.

PUT = the right to **SELL** at the strike. Puts get more valuable when the price goes **down**.



A call is like a reservation coupon

A new game console costs \$500. You pay the store \$20 for a coupon that lets you buy it at \$500 any time until Friday. Hype explodes and the price jumps to \$600. Your coupon lets you buy at \$500, so it's worth about \$100! If the price drops instead, you just don't use it. You lose only the \$20.

A put is like a guaranteed buy-back

You own a bike worth \$300. You pay \$15 for a promise that someone will buy it from you for \$300 until Friday, no matter what. If bike prices crash to \$200, your promise saves you \$100. If prices rise, you ignore it and lose just the \$15. It works like insurance.

Worked SPY Example (illustrative)

SPY is at \$580. Two options expiring this Friday:

- **SPY 585 call**: the right to **buy** 100 shares of SPY at \$585 each until Friday. Useful if you think SPY will rise above \$585.
- **SPY 575 put**: the right to **sell** 100 shares of SPY at \$575 each until Friday. Useful if you think SPY will fall below \$575.

Buying a call is a **bullish** bet (expecting a rise 🐂). Buying a put is a **bearish** bet (expecting a fall 🐻).

The expiration menu: how long does your "coupon" last?

Name	What it means	Example (if today is Monday)
ODTE	"Zero days to expiration": the option expires today at the close	Buy Monday, expires Monday
Daily	SPY has an expiration on every trading day, Mon–Fri	Tuesday's, Wednesday's, Thursday's...
Weekly	Expires at the end of the week (usually Friday)	This Friday = 4 DTE
Monthly	The classic: the 3rd Friday of the month	Could be 2–4 weeks away

Mini Quiz 2

1. You think SPY is going to go **up**. Would you buy a call or a put?
2. In an option trade, who has the *right*, and who has the *obligation*?
3. What does "ODTE" mean, and what's the DTE of a Friday option bought on Wednesday?

3 Strike, premium, expiration & "the money"

Reading an option chain like a pro

- **Strike:** the locked-in price. A "582 call" can buy SPY at \$582.
- **Expiration:** the last day the option exists. After that, it's either worth something or it's gone.
- **Premium:** the option's price, **quoted per share**. Here's the big one: **1 contract = 100 shares**. So a premium of **\$1.20** really costs $\$1.20 \times 100 = \120 . (Brokers may add small per-contract fees; we'll ignore them to keep the math clean.)
- **Bid / Ask:** the bid is what buyers will pay right now, the ask is what sellers want. The real price is usually somewhere between. We use the middle ("mid") here.

Worked SPY Example: a 0DTE option chain at 10:00 AM ET (illustrative, model-estimated)

SPY = \$580.00. Every option below expires **today**.

Call price	Call is...	Strike	Put is...	Put price
\$4.67	ITM	576	OTM	\$0.67
\$3.25	ITM	578	OTM	\$1.25
\$2.10	ATM	580	ATM	\$2.10
\$1.25	OTM	582	ITM	\$3.25
\$0.68	OTM	584	ITM	\$4.68

Buying one 582 call at \$1.25 costs **\$125**. Buying one 576 put at \$0.67 costs **\$67**.

In, at, or out of the money?

	In the money (ITM)	At the money (ATM)	Out of the money (OTM)
CALL	SPY above strike	SPY $\approx$ strike	SPY below strike
PUT	SPY below strike	SPY $\approx$ strike	SPY above strike

Every premium has two parts: **Intrinsic value** is what it would be worth if it expired right now (how far ITM it is). **Extrinsic value** (also called **time value**) is everything else: the extra people pay for the *chance* it moves further before expiration.

578 call @ \$3.25 with SPY at \$580 $\rightarrow$ intrinsic = $580 - 578 = \$2.00$ • time value = $\$3.25 - \$2.00 = \$1.25$

OTM options are **100% time value**. If SPY never reaches the strike, that time value melts to zero by expiration.



Nova's tip

Always multiply by 100 in your head. A "\$0.45" option sounds like pocket change, but it's really \$45. Ten of them = \$450. Tiny-looking numbers are how people accidentally take big risks.

Mini Quiz 3

1. An option's premium is \$0.45. How much does one contract cost?
2. SPY is at \$580. Is a **590 put** ITM, ATM, or OTM? By how much?
3. The 576 call costs \$4.67 with SPY at \$580. What are its intrinsic value and time value?

4 Payoff at expiration: do the math!

Break-even, max loss, and what happens at different closing prices

At expiration, an option is worth exactly its **intrinsic value**. Nothing more, because there's no time left. That makes the end-of-day math clean:

Call value at expiration = $\max(\text{SPY} - \text{strike}, 0)$ Put value = $\max(\text{strike} - \text{SPY}, 0)$

Call break-even = $\text{strike} + \text{premium}$ Put break-even = $\text{strike} - \text{premium}$

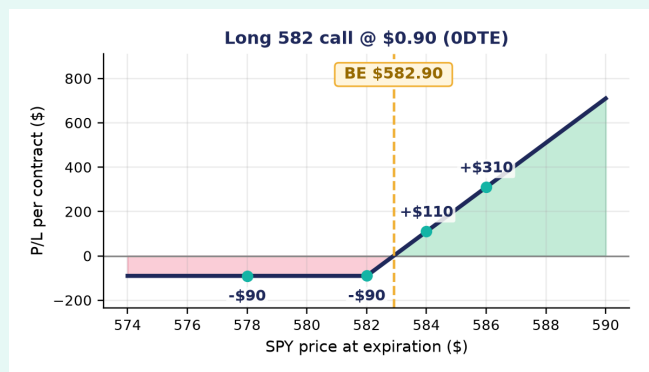
Buyer's max loss = premium paid

Worked SPY Example: 0DTE call (illustrative prices)

Around 12:30 PM, SPY is at **\$580**. You buy **1 SPY 582 call** expiring **today** for **\$0.90** → cost = $0.90 \times 100 = \$90$.

Break-even = $582 + 0.90 = \$582.90$. SPY must rise more than \$2.90 (about 0.5%) by the close just for you to *not* lose.

SPY close	Value/sh	Contract	Profit / loss
\$578.00	\$0.00	\$0	-\$90 (-100%)
\$580.00	\$0.00	\$0	-\$90 (-100%)
\$582.00	\$0.00	\$0	-\$90 (-100%)
\$582.90	\$0.90	\$90	\$0 (break-even)
\$584.00	\$2.00	\$200	+\$110 (+122%)
\$586.00	\$4.00	\$400	+\$310 (+344%)



If SPY just sits still (or only ticks up \$2), you lose everything. That's what "the option expired worthless" means.

Quick put example

SPY \$580. Buy **1 SPY 578 put** (0DTE) for **\$0.85** = \$85. Break-even = $578 - 0.85 = \$577.15$.

Close \$580 → **-\$85** · Close \$577.15 → \$0 · Close \$575 → $(3.00 - 0.85) \times 100 = \textbf{+$215}$

How SPY options settle

SPY options are **American-style** (they can be exercised any day up to expiration) and **physically settled**: exercising a call means actually buying 100 shares. An option even \$0.01 ITM at expiration is normally **auto-exercised**. A 582 call would mean buying \$58,200 of SPY! That's why traders usually **sell to close** before the bell. (SPX index options, by contrast, are European-style and cash-settled.)

Mini Quiz 4

1. What's the break-even of a 585 call bought for \$1.10?
2. You bought the 582 call above for \$0.90. SPY closes at \$581. What's your profit or loss?
3. You buy a 575 put for \$0.70. What's the break-even, and what's your P/L if SPY closes at \$572?

5 The Greeks (kid-level, but real)

Four Greek letters that describe how an option's price behaves

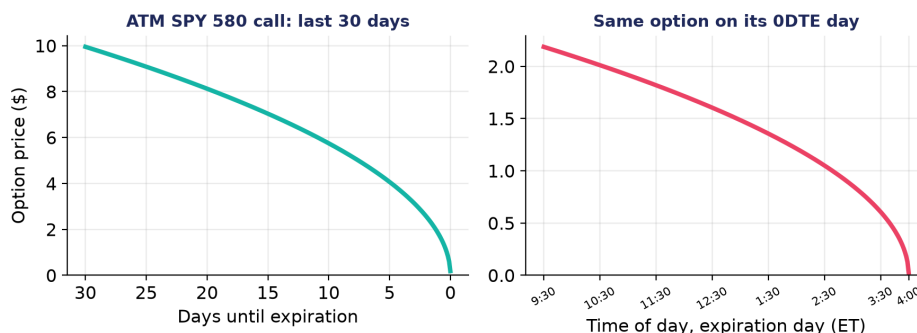
Δ Delta: "How much do I move?"

Delta is about how much the option's price changes when SPY moves **\$1**. A call with delta **0.33** gains about **\$0.33** (= \$33 per contract) if SPY rises \$1. Puts have **negative** delta (they gain when SPY falls). Bonus rule of thumb: delta is roughly the **chance the option finishes in the money**. A 0.33-delta call has very roughly a 1-in-3 shot.



Θ Theta: the melting ice cube

Time value **melts** every day, even if SPY doesn't move at all. That's **time decay**, measured by theta. And the melting **speeds up** as expiration gets closer. A month out, the ice cube is big and melts slowly. In the final days it shrinks fast. On a **0DTE** day, it melts **by the hour**.



Worked SPY Example (model estimates, SPY stays at \$580, 15% volatility)

An at-the-money 580 call is worth about **\$9.95** with 30 days left, **\$5.74** with 10 days, and **\$1.82** with 1 day left. On expiration day: **\$2.19** at the 9:30 open → **\$1.60** at 12:30 → **\$1.05** at 2:30 → **\$0.61** at 3:30 → **\$0** at the 4:00 close (if SPY is still exactly \$580). The last 20 days cost ~\$4.21. The final day wipes out everything that's left.

Γ Gamma: "How fast does delta change?"

Gamma is the **accelerator**. High gamma means delta jumps quickly as SPY moves. Near-the-money options close to expiration have **huge gamma**, so they can flip from "almost worthless" to "worth a lot" (and back) in minutes.

ν Vega & $\mathcal{V}$: "How jumpy does the market expect SPY to be?"

Implied volatility (IV) is the market's guess at how much SPY will wiggle. Higher IV → pricier options. Vega measures that effect. The same 0DTE 582 call might cost ~\$0.99 at 15% IV but ~\$1.56 at 20% IV. After big news (like a Fed announcement), IV often drops fast. That's called **IV crush**.

Mini Quiz 5

1. A call has delta 0.40. SPY rises \$2. About how much does one contract gain in dollars?
2. Which loses value faster per day if SPY doesn't move: a 30-day ATM option or a 0DTE ATM option?
3. If implied volatility rises and nothing else changes, do option prices usually go up or down?

6 Why short-dated options swing so much

Leverage + gamma = a roller coaster

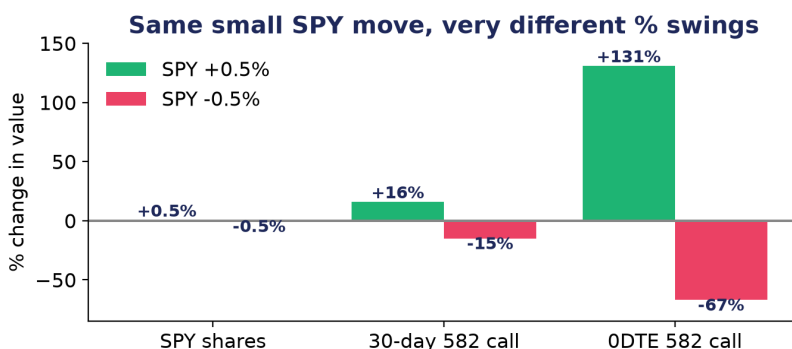


Two forces make ODTE and daily options wild. **Leverage:** for about \$100 you get exposure to 100 shares of SPY (that's ~\$58,000 worth), so small moves in SPY turn into big percentage moves in the option. **Gamma:** close to expiration, delta changes really fast, so the option reacts more and more strongly as SPY moves toward or away from the strike.

Worked SPY Example: same move, three different results (model estimates)

11:30 AM, SPY = \$580. Compare three ways to bet on SPY going up:

	Cost now	If SPY → \$582.90 (+0.5%)	If SPY → \$577.10 (−0.5%)
100 SPY shares	\$58,000	\$58,290 (+0.5%)	\$57,710 (−0.5%)
30-day 582 call	\$9.00 (\$900)	≈\$10.45 (+16%)	≈\$7.68 (−15%)
ODTE 582 call	\$1.00 (\$100)	≈\$2.31 (+131%)	≈\$0.33 (−67%)



Gamma in action: after that \$2.90 rise, the ODTE call's delta jumps from about 0.33 → 0.58. The 30-day call's delta only goes 0.48 → 0.52. And if SPY just **sits at \$580** until 4:00 PM? The ODTE 582 call goes to **\$0 (−100%)**, while the 30-day call barely notices.



Nova's tip

"+131%!" is exciting. But look at the other column too: the same-sized move the other way costs two-thirds of your money, and doing *nothing* costs all of it. Big swings cut both ways. Fast games demand slow, careful thinking.

Mini Quiz 6

1. You buy a ODTE call for \$0.50 and it rises to \$1.50. What's your percentage gain? What if it had fallen to \$0.10?
2. In your own words: why does a ODTE at-the-money option have such big gamma?
3. SPY doesn't move all day. What happens to a ODTE *out-of-the-money* call by the close?

7 Spreads: risk with a ceiling and a floor

Buy one option, sell another, and you know your best and worst case in advance

A **spread** means buying one option and selling another on the same stock and expiration but at different strikes. Selling the second option **lowers your cost**, but it also **caps your profit**. The win: your **max loss and max gain are known before you start**.

Debit spread: max loss = net debit

max gain = strike width - debit

Bull call spread (weekly, expires Friday)

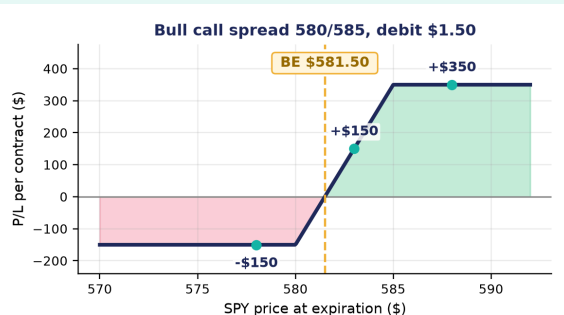
SPY \$580. Buy 580 call @ \$2.00, sell 585 call @ \$0.50.

Net debit = $2.00 - 0.50 = \$1.50 \rightarrow \150

Max loss = **\$150** (SPY $\leq$ \$580 at expiration)

Max gain = $(5 - 1.50) \times 100 = \350 (SPY $\geq$ \$585)

Break-even = $580 + 1.50 = \$581.50$



Bear put spread (weekly, expires Friday)

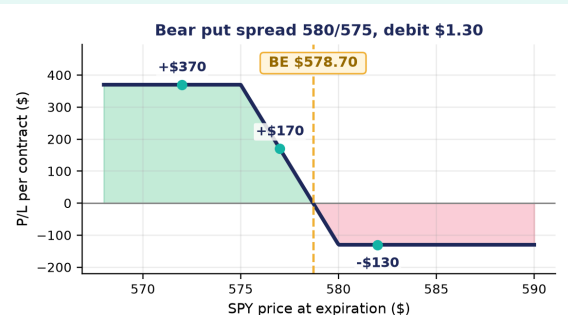
SPY \$580. Buy 580 put @ \$1.90, sell 575 put @ \$0.60.

Net debit = $1.90 - 0.60 = \$1.30 \rightarrow \130

Max loss = **\$130** (SPY $\geq$ \$580 at expiration)

Max gain = $(5 - 1.30) \times 100 = \370 (SPY $\leq$ \$575)

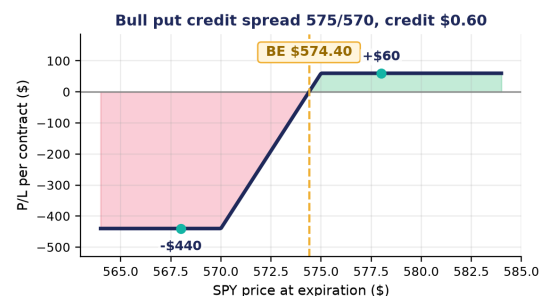
Break-even = $580 - 1.30 = \$578.70$



SPY at Friday close	\$576	\$578	\$580	\$581.50	\$583	\$585	\$590
Bull call spread P/L	-\$150	-\$150	-\$150	\$0	+\$150	+\$350	+\$350
Bear put spread P/L	+\$270	+\$70	-\$130	-\$130	-\$130	-\$130	-\$130

Credit spreads: defined risk is still REAL risk

A **credit spread** flips it around: you sell the more expensive option and get paid up front. Example **bull put credit spread**: sell 575 put @ \$1.00, buy 570 put @ \$0.40 $\rightarrow$ collect **\$0.60 (\$60)**. Max gain = **\$60** (SPY $\geq$ \$575). Max loss = $(5 - 0.60) \times 100 = \440 (SPY $\leq$ \$570). Break-even = **\$574.40**. You win small most of the time, then occasionally lose 7 $\times$ as much. Also, SPY options are American-style, so a short option can be **assigned early**. Most traders close spreads before expiration to avoid surprises.



Mini Quiz 7

1. Buy a 590 call @ \$1.20, sell a 595 call @ \$0.40 (same expiration). Find the net debit, max loss, max gain, and break-even.
2. Why does selling the 585 call make the bull call spread cheaper, and what do you give up?
3. A \$5-wide credit spread collects \$0.60. What's the max loss for one spread?

8 Honest risk lessons

The stuff the "I made 1,000% on ODTE!" videos leave out

1. **Most short-dated options that people buy expire worthless.** Cheap OTM options are cheap *because* they usually lose. A 0.20-delta call finishes ITM only about 1 time in 5, and even then it might not get past break-even.
2. **Buyers can lose 100%, fast.** With ODTE, "fast" means hours or minutes (Lesson 6).
3. **Sellers of naked options can lose MORE than they put in.** Selling an option without owning protection is called **naked** selling. For calls, the loss has no ceiling.



Worked SPY Example: the naked call trap (illustrative)

SPY \$580. Someone **sells** a 585 call (ODTE) for \$0.50 and collects **\$50**. Surprise news hits and SPY closes at **\$595**. They owe the call's value: $(595 - 585) = \$10.00 \rightarrow \$1,000$. Net = $\$50 - \$1,000 = -\$950$. That's **19x what they collected**. A spread (Lesson 7) would have capped it. That's why brokers only let experienced, approved adults sell naked options.

4. **Emotions are the real opponent.** Watch for **FOMO** (fear of missing out), **revenge trading** (trying to "win it back" right after a loss), and **overtrading** (clicking because it's exciting, not because there's a plan). ODTE feels like a video game. That's the danger.
5. **Position sizing keeps you in the game.** A common rule: never risk more than **1–2% of your account** on one trade.

Position sizing example

Paper account = **\$10,000**. 1% rule $\rightarrow$ max risk **\$100** per trade. One 582 call at \$0.90 (\$90 max loss) fits. Five of them (\$450) does **not**, even if you "feel sure."

The rules of the road

- **Practice on paper first.** Many brokers offer paper-trading simulators with pretend money (for example thinkorswim's paperMoney, Webull's paper trading, or an Interactive Brokers paper account). An adult should set it up and check each platform's age rules and terms.
- **Real trading accounts require an adult.** You generally must be 18+ (in some states, older) to open a brokerage account in your own name, and options trading needs a separate broker approval. **Custodial accounts** (UTMA/UGMA) that adults open for kids **generally can't trade options**.
- **This is education, not financial advice.** The numbers are examples, and no strategy here is a recommendation.

Mini Quiz 8

1. Someone sells a naked 585 call for \$0.50 and SPY closes at \$590. What's their profit or loss?
2. You have a \$5,000 paper account and use the 2% rule. What's the most you should risk on one trade?
3. Name two emotional traps from this lesson and one way to fight each.

9 Your paper-trading challenge

Four weeks · pretend money · real skills



Nova's challenge

Here's the twist: **you score points for following your rules, not for making money.** Pros last because of process, not luck. Start with a \$10,000 paper account and review your journal each weekend with your family.

Tip: write your plan **before** you click. If you can't fill in the "max loss" and "exit plan" boxes, you're not ready for that trade.

Week	Mission	Badge to earn
1 · Observer	No trades. Each day, record SPY's open and close and make a guess (up/down) before the open. Pick the 0DTE ATM call and write its price at 10:00, 12:00, 2:00 and 3:30. Watch the ice cube melt!	Time-Decay Detective
2 · Careful Buyer	Max 1 paper trade per day , 1 contract, using weekly (not 0DTE) options. Before each trade, write the break-even and max loss.	Plan-Before-Click
3 · Spread Builder	Paper-trade bull call and bear put spreads. Calculate max gain, max loss and break-even <i>first</i> , then check whether the result matched your math.	Spread Mathematician
4 · 0DTE Lab	One tiny 0DTE paper trade per day (within the 1–2% rule). Use a time stop : close it by 3:00 PM no matter what. Note how fast it moved (gamma!).	Gamma Tamer

Trade journal (copy this into a notebook or spreadsheet)

Date	Option(s) & expiration	Why? (my idea)	Cost	Max loss	Break-even	Exit plan	Result	Lesson learned
Mon	Buy 1 SPY 585C @ \$1.50, Fri exp.	Bounce off \$578	\$150	\$150	\$586.50	Sell at +50% or Thu 3 PM	-\$60	Theta ate it while I waited

Scorecard: points for process

Action	Points	Action	Points
Wrote the plan before entering	+3	Calculated break-even correctly	+2
Stayed within the 1–2% risk rule	+3	Followed the exit plan (win or lose)	+3
Wrote a "lesson learned"	+1	Revenge trade / broke a rule	-5

Mini Quiz 9

1. Name three things you should write down *before* every paper trade.
2. Why does the scorecard reward following rules instead of profits?



Nova's one-page cheat sheet

Tape this above your desk

The basics

Call = right to **buy** at the strike (bullish). **Put** = right to **sell** at the strike (bearish).

Buyer has the **right** and pays the premium. Seller has the **obligation** and collects it.

1 contract = 100 shares → premium \$1.20 = **\$120**.

Expirations (SPY)

ODTE = expires today · **Daily** = every trading day Mon–Fri · **Weekly** = end of week (Fri) · **Monthly** = 3rd Friday.

SPY options are **American-style** and **physically settled** (100 shares). ITM by \$0.01+ at expiration → usually **auto-exercised**.

Moneyness (SPY = \$580)

	ITM	ATM	OTM
Call	575	580	585
Put	585	580	575

Premium = **intrinsic** (ITM amount) + **time value**.

Expiration math

Call value = $\max(\text{SPY} - K, 0)$ · Put value = $\max(K - \text{SPY}, 0)$

Call BE = $K + \text{premium}$ · **Put BE** = $K - \text{premium}$

P/L = $(\text{value} - \text{premium}) \times 100$ · Buyer's max loss = premium

Spreads (\$5 wide examples)

Debit (bull call / bear put): max loss = debit · max gain = width – debit

Bull call BE = long K + debit · Bear put BE = long K – debit

Credit spread: max gain = credit · max loss = width – credit

Bull put credit BE = short K – credit

The Greeks

Δ Delta: \$ change per \$1 SPY move; ≈ chance of finishing ITM

Θ Theta: time decay; speeds up near expiration (ODTE melts hourly)

Γ Gamma: how fast delta changes; huge for ATM ODTE

ν Vega: sensitivity to IV; IV up → price up; watch for IV crush

Short-dated reality check

Small SPY move → huge % option move (both ways).

No move → OTM ODTE options go to **\$0**.

Naked selling → losses can exceed what you collected.

✓ Pre-trade checklist (paper!)

- ☐ Call or put? Which strike and expiration?
- ☐ Cost = premium × 100 × contracts
- ☐ Break-even and max loss written down
- ☐ Max loss ≤ 1–2% of account
- ☐ Profit target, stop, and time stop set
- ☐ No big news (IV crush) surprise coming?

★ Nova's golden rules

1. Run the numbers before you click (BE + max loss).
2. Risk ≤ 1–2% per trade.
3. Have an exit plan *and* a time stop.
4. No revenge trades. Walk away after a loss.
5. Paper first. Real accounts are adult-only (18+).
6. Prices here are illustrative. Not financial advice.



Glossary

Every term used in this guide

ODTE "Zero days to expiration": an option that expires today.

American-style An option that can be exercised any time up to expiration. SPY options are American-style.

Ask The lowest price a seller is currently willing to accept.

Assignment When an option seller is required to fulfill the contract (sell or buy the shares) because the buyer exercised.

At the money (ATM) Strike is about equal to the current stock price.

Auto-exercise Options ITM by \$0.01 or more at expiration are normally exercised automatically.

Bear / bearish Expecting prices to fall.

Bear put spread Buy a put and sell a lower-strike put (same expiration). Profits if the price falls; risk capped at the debit.

Bid The highest price a buyer is currently willing to pay.

Break-even (BE) The price at expiration where a trade neither makes nor loses money.

Bull / bullish Expecting prices to rise.

Bull call spread Buy a call and sell a higher-strike call (same expiration). Profits if the price rises; risk capped at the debit.

Bull put credit spread Sell a put and buy a lower-strike put. Collect a credit up front; max loss = width – credit.

Call An option giving the right to buy at the strike price.

Cash-settled Settled in cash instead of shares (e.g., SPX index options).

Contract One option; for SPY it covers 100 shares.

Credit spread A spread where you receive money up front; defined but real risk.

Custodial account An account (UTMA/UGMA) an adult manages for a minor; generally can't trade options.

Debit spread A spread where you pay money up front; max loss = the debit.

Delta (Δ) How much an option's price changes per \$1 move in the stock; roughly the chance of finishing ITM.

Diversification Spreading money across many investments so one bad one hurts less.

DTE Days to expiration.

ETF Exchange-traded fund: a basket of investments that trades like one stock.

European-style An option that can be exercised only at expiration (e.g., SPX options).

Exercise Using the option's right to buy (call) or sell (put) at the strike.

Expiration The last day an option exists.

Extrinsic / time value The part of the premium above intrinsic value; melts to zero by expiration.

FOMO Fear of missing out: trading because others seem to be winning.

Gamma (Γ) How fast delta changes as the stock moves; largest for ATM options near expiration.

Implied volatility (IV) The market's expectation of how much the stock will move; higher IV = pricier options.

In the money (ITM) Call: stock above strike. Put: stock below strike.

Index A number that tracks a group of stocks, like the S&P 500.

Intrinsic value What an option would be worth if exercised right now (how far ITM).

IV crush A sharp drop in implied volatility, often right after big news, which lowers option prices.

Leverage Controlling a big position with a small amount of money, which magnifies % gains and losses.

Max gain / max loss The most a trade can make or lose.

Monthly options Standard options expiring the 3rd Friday of the month.

Naked option Selling an option without owning the shares or a protective option; risk can exceed what you collect.

Option A contract giving the right (not obligation) to buy or sell at a set price until expiration.

Option chain The table listing all strikes and prices for an expiration.

Out of the money (OTM) Call: stock below strike. Put: stock above strike. All time value.

Overtrading Trading too often, usually out of excitement rather than a plan.

Paper trading Practicing trades with pretend money in a simulator.

Physically settled Exercise results in actual shares changing hands (SPY options).

Position sizing Deciding how much to risk on one trade (e.g., ≤1–2% of the account).

Premium The price of an option, quoted per share (× 100 per contract).

Put An option giving the right to sell at the strike price.

Revenge trading Rushing into a trade to "win back" a loss.

S&P 500 An index of about 500 large U.S. companies.

Sell to close Selling an option you own to exit before expiration.

Seller / writer The person who sells an option, collects the premium, and takes on the obligation.

Share / stock A unit of ownership in a company.

Spread Buying one option and selling another to shape (and cap) risk and reward.

SPX Options on the S&P 500 index itself; European-style and cash-settled.

SPY The SPDR S&P 500 ETF Trust, which tracks the S&P 500; price ≈ 1/10 of the index.

Strike The locked-in price in an option contract.

Theta (Θ) How much value an option loses per day from time passing.

Time decay The melting of time value as expiration approaches.

Time stop A rule to exit a trade by a certain time, no matter what.

Underlying The stock or ETF an option is based on (here, SPY).

Vega (v) How much an option's price changes when implied volatility changes.

Volatility How much and how fast a price moves around.

Weekly options Options that expire at the end of a given week (usually Friday).



Answer key

No peeking until you've tried!

Quiz 1: Stocks, ETFs & SPY

1. The S&P 500, about 500 large U.S. companies.
2. $\$580 \times 1.02 = \mathbf{\$591.60}$.
3. Diversification: one purchase spreads your money across ~500 companies, so one company's bad news hurts less. (Simplicity is also a good answer.)

Quiz 2: Calls & puts

1. Buy a **call**.
2. The **buyer** has the right; the **seller (writer)** has the obligation.
3. It expires today. Wednesday → Friday = **2 DTE**.

Quiz 3: The chain

1. $\$0.45 \times 100 = \mathbf{\$45}$.
2. **ITM** by \$10 (a put is ITM when SPY is below the strike: $590 - 580$).
3. Intrinsic = $580 - 576 = \mathbf{\$4.00}$; time value = $4.67 - 4.00 = \mathbf{\$0.67}$.

Quiz 4: Payoffs

1. $585 + 1.10 = \mathbf{\$586.10}$.
2. 581 is below the 582 strike → worth \$0 → **-\$90**.
3. BE = $575 - 0.70 = \mathbf{\$574.30}$. At \$572: value = $\$3.00 \rightarrow (3.00 - 0.70) \times 100 = \mathbf{+\$230}$.

Quiz 5: Greeks

1. $0.40 \times \$2 = \0.80 per share → about **+\$80** per contract (a bit more in reality, since gamma raises delta as SPY climbs).
2. The **0DTE** option. Decay speeds up near expiration.
3. Prices usually go **up**.

Quiz 6: Swings

1. $(1.50 - 0.50) / 0.50 = \mathbf{+200\%}$. At \$0.10: $(0.10 - 0.50) / 0.50 = \mathbf{-80\%}$.
2. With almost no time left, the option is about to become either "worth \$0" or "worth its ITM amount," so each small SPY move near the strike shifts that outcome a lot. Delta swings quickly between ~0 and ~1.
3. It expires **worthless**: the buyer loses 100% of the premium.

Quiz 7: Spreads

1. Debit = $1.20 - 0.40 = \mathbf{\$0.80 (\$80)}$ = max loss. Max gain = $(5 - 0.80) \times 100 = \mathbf{\$420}$. BE = $590 + 0.80 = \mathbf{\$590.80}$.
2. The premium you collect from the 585 call offsets part of the 580 call's cost. In exchange, you give up any profit above \$585 (your gain is capped).
3. $(5.00 - 0.60) \times 100 = \mathbf{\$440}$.

Quiz 8: Risk

1. They owe $(590 - 585) = \$5.00 \rightarrow \500 ; collected \$50 → **-\$450**.
2. $2\% \times \$5,000 = \mathbf{\$100}$.
3. Examples: **FOMO** (fix: only trade setups written in your plan); **revenge trading** (fix: stop for the day after a loss); **overtrading** (fix: max 1 trade per day). Any two with a sensible fix count.

Quiz 9: The challenge

1. Any three: the option(s) and expiration, why (your idea), cost, max loss, break-even, exit plan / time stop.
2. Profits on a few trades can be pure luck. Rules are what protect you over hundreds of trades. Good process leads to good long-run results; lucky wins can teach bad habits.



Nova

You made it! You now understand options better than a lot of adults who trade them. Keep practicing on paper, keep your journal honest, and remember: **the goal isn't one huge win. It's still being in the game years from now.** See you in the simulator! ★

Educational material only. Not financial or investment advice. All prices are illustrative examples (some estimated with a Black-Scholes model at 15% implied volatility, no interest or dividends), not real quotes. Options involve substantial risk and are not suitable for all investors. Before real trading, an adult should read the OCC's *Characteristics and Risks of Standardized Options*. Illustrations of the original character "Nova Amari" were AI-generated for this guide.