

# How to prepare for the Quant interviews

Thinking of applying to our quant internship or full-time trading/research roles? These interviews are tough, but with the right prep, you can stand out. Here's your guide to getting ready.

## What Interviewers Are Looking For

From what top trading and quant firms ask, plus what we at Wincent value, here's the mix:

- Strong **quantitative skills**: probability, statistics, combinatorics, expected value, variance, etc.
- Mental math and speed under pressure.
- Logical reasoning, brain teasers, sequence/pattern recognition.
- Programming / data skills: knowing how to code, analyze data, do backtesting, understand basic algorithms.
- Soft skills & thought process: communication, clarity of reasoning ("how did you get there?"), ability to think under uncertainty.

## Stages You Should Prepare For

From many quant/trading firms, there's a common structure. We follow something similar (games, interviews, technical rounds). Here's what to expect and prep for each stage:

Stage	What Happens	How to Prepare
<b>CV / Application</b>	Screening for academic performance / relevant projects / competitions / clear interest in quant/trading	Highlight coursework (probability, stats, algorithms), any project work, contests (math / programming). Make resume clean, one page.

<b>Online Assessments</b>	Timed problem sets: mental math, logic puzzles, coding tasks, maybe statistics or probability questions.	Practice speed arithmetic (without a calculator), practice timed puzzles. Use online platforms. Work on past quant interview questions.
<b>Technical Interviews</b>	Problem solving live: brainteasers, probability/statistics problems, sometimes “games” or mock trading scenarios; programming/coding questions; possibly case study of a strategy or backtesting.	Review probability & stats; do puzzle work; write code (Python/C++) solving algorithmic / data tasks; do mock interviews; think out loud; explain assumptions.
<b>Final Round / Onsite / Superday</b>	Multiple rounds, mix of technical and behavioral; sometimes group games; maybe a trading-game / simulation; often more advanced or deeper questions.	Be ready for deeper questions; refine your verbal explanation; practice with others; prepare questions for the interviewer; rest well so you're sharp.

## Practical Tips That Make a Difference

Here are things people often underestimate, but which can have big impact — drawn from what works at Wincent and what other firms recommend:

- **Practice under time pressure;** timed puzzles, fast arithmetic. In many firms you will have <1 minute per question in some rounds. Being comfortable under time pressure helps.
- **Explain your steps;** even if you don't finish, showing your reasoning and thought process scores points. Interviewers want to see how you think, not just what you get.
- **Mock interviews / peer-practice;** find someone to practice with, simulate the interview environment, even record yourself explaining solutions.
- **Projects / past work;** have something ready to talk about: what you solved, what tools you used, what mistakes you made, how you improved. Real-world projects or research work are a plus.
- **Know your programming tools;** being able to code cleanly, debug, use data libraries, maybe basics of algorithms or data structures. If back-testing is part of the role, know

how to build or interpret simple backtests.

- **Behavior & culture**; be curious. Be asking good questions: about team structure; what problem sets you might be working on; what strategies or markets your firm focuses on. Show that you care about more than technical correctness.
- **Stay sharp in basics**; probability distributions, expected value, conditional probability, combinatorics, some continuous mathematics (integrals, derivatives) if relevant; also practice thinking about what risk means in trading.

## What Differentiates Candidates

These are things that tend to separate the good from the great:

- Speed + accuracy + clarity together. Someone who solves more slowly but explains well often beats someone who solves faster but murkily.
- Comfort with ambiguity: many interview questions don't come with full information; showing you can make assumptions, articulate them, and proceed systematically helps.
- Breadth + depth: you don't need to know everything deeply, but having a few topics you know very well (say probability, stats, or algorithmic coding) helps you push ahead in interviews.
- Relevant competition / hackathon / research experience. If you've done math Olympiads, ICPC / coding contests, or data-science / trading projects, bring them forward. It signals you've practiced under pressure.

## What to Do in the Final Stretch

**Make sure to get a good night's sleep.**

Eat healthy food, avoid junk, alcohol, and large meals close to bedtime.

In the last few days before the interview you may want to (*but don't have to!*):

1. **Review common puzzles / games**: find quant interview question banks (mental math, brainteasers) and run through a few.
2. **Do mini-projects** or revisit ones you already did; make sure you can describe them well: what you did, what you learned.

3. **Brush up finance basics:** even if you won't be asked Black-Scholes, having basic understanding of risk, market micro-structure, and what makes a trading strategy good vs. fragile helps.
4. **Rest & simulate conditions:** test yourself under time constraint; wake up early if interview is morning; do mock interview with someone unfamiliar with your work so you practice explaining things cleanly.

## Common Mistakes to Avoid

- Trying to memorize too many questions rather than understanding underlying principles.
- Not speaking loud enough during problem solving.
- Neglecting basic math / probability under pressure.
- Ignoring edge cases or failure modes (e.g. what if data is missing, or strategy loses money).
- Assuming you know what interviewers want without asking clarifying questions when a question is ambiguous.

Good luck!