

STUDENT WORKBOOK / E01 / APPROX. 5 MIN

Sizing a yen pair for a euro account

Objective: Convert the pip value to the account currency and choose a tradable volume within a fixed risk budget.

Name: _____ Date: _____

This is a wholly hypothetical teaching exercise. An account holds 10,000 EUR and permits a planned price-move risk of 1% of that balance on one USD/JPY position.

Use a 100,000 USD contract per lot, a pip size of 0.01 JPY per USD and a fixed conversion rate of 1 JPY = 0.006 EUR. The stop is 25 pips from entry.

The allowed volume step and minimum are both 0.01 lots. Spread, commission, slippage and all other additional costs are zero in this model.

Calculate the maximum allowed lot size. Apply the volume rule without exceeding the risk budget and show the units at each conversion.

Decision: Which currency conversions and volume-rounding rule should you apply before submitting the position size?

My decision and reason

Calculation and units

One limit of this model

Source case (online feedback and answers): <https://forexmechanics.com/tools/decision-lab/#case=jpy-position>

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STUDENT WORKBOOK / E02 / APPROX. 5 MIN

Execution costs and net expectancy

Objective: Convert a pip cost into R and deduct an additional cost consistently from before-cost expectancy.

Name: _____ Date: _____

This is a wholly hypothetical teaching exercise. A two-average trade model has a 45% win rate, an average gross winner of +1.8R and an average gross loser of -1R.

Define 1R as the monetary risk of a 5-pip adverse price move at the unchanged position size. An additional average execution cost of 1.5 pips applies to every trade, whether it wins or loses.

The reported winners and losers are before this cost. There are no other additional costs, and the supplied averages remain fixed for this arithmetic exercise.

Calculate net expectancy in R per trade. Include the sign of the result and show both gross expectancy and the cost expressed in R.

Decision: How should this additional execution cost enter the expectancy calculation without being omitted or counted twice?

My decision and reason

Calculation and units

One limit of this model

Source case (online feedback and answers): <https://forexmechanics.com/tools/decision-lab/#case=execution-costs>

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STUDENT WORKBOOK / E03 / APPROX. 5 MIN

Shared dollar exposure

Objective: Calculate signed currency legs and distinguish common currency exposure from planned stop-loss budgets.

Name: _____ Date: _____

This is a wholly hypothetical teaching exercise. A USD account with 10,000 USD equity holds three long positions: 0.10 lots EUR/USD, 0.10 lots GBP/USD and 0.10 lots AUD/USD.

Each standard lot contains 100,000 base-currency units. At one illustrative instant, EUR/USD is 1.10 USD per EUR, GBP/USD is 1.25 USD per GBP and AUD/USD is 0.65 USD per AUD.

Represent each position as a positive base-currency leg and a negative USD quote-currency leg. These are exposure units, not literal account cash balances. Each position also has a separately stipulated 100 USD planned stop-loss budget, with zero additional costs.

Calculate the signed combined USD quote-currency exposure. Use a minus sign for a short USD leg. Keep this quantity separate from the stop-loss budgets.

Decision: Does holding three different pair names remove common currency exposure? Explain what the currency legs reveal and what a stop-loss budget measures separately.

My decision and reason

Calculation and units

One limit of this model

Source case (online feedback and answers): <https://forexmechanics.com/tools/decision-lab/#case=usd-concentration>

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STUDENT WORKBOOK / E04 / APPROX. 5 MIN

Order of returns and maximum drawdown

Objective: Track current-equity compounding and measure drawdown against the running equity peak.

Name: _____ Date: _____

This is a wholly hypothetical teaching exercise. Two accounts each start at 10,000 USD. Before every trade, the price-move risk is 10% of that account's current equity. This large fraction is chosen for visible arithmetic and is not a recommended or safe risk level.

Sequence A has net R outcomes +1, +1, +1, -1, -1. Sequence B has net R outcomes -1, +1, -1, +1, +1. Equity after each trade equals prior equity multiplied by $(1 + 0.10 \times \text{that trade's R outcome})$.

All outcomes are already net, with no extra costs, deposits, withdrawals or execution variation. Include the initial equity when tracking the running peak.

Build the equity path and calculate the largest peak-to-subsequent-trough percentage drawdown for Sequence A. Express the result as a percent, not a decimal fraction.

Decision: For these identical sets of multiplicative returns, which of ending equity and maximum drawdown can change when the trade order changes, and why?

My decision and reason

Calculation and units

One limit of this model

Source case (online feedback and answers): <https://forexmechanics.com/tools/decision-lab/#case=backtest-sequence>

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STUDENT WORKBOOK / E05 / APPROX. 5 MIN

Cleaning a mixed journal export

Objective: Define a valid completed-trade sample before calculating mean realised net R.

Name: _____ Date: _____

This is a wholly hypothetical teaching exercise. A journal export contains five rows, in this order: A-01, completed, realised net R +1; B-02, completed, realised net R -1; B-02, copied completed row, net R -1; C-03, planned, hypothetical target R +2; D-04, completed, realised net R +2.

You have confirmed that the second B-02 row is an accidental copy of the same trade, not a partial fill or another completed trade. Each other completed record represents one unique fully closed trade.

A planned target is not a realised outcome. Completed outcomes are already net, and there are no further cost adjustments.

Select the records that belong in a realised-performance sample and calculate mean net R per valid completed trade. Report the mean to three decimal places and state which rows you retained.

Decision: Which rows should be retained or excluded, and what documented reason supports each exclusion?

My decision and reason

Calculation and units

One limit of this model

Source case (online feedback and answers): <https://forexmechanics.com/tools/decision-lab/#case=journal-quality>

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STUDENT WORKBOOK / E06 / APPROX. 5 MIN

Free margin and stop-loss risk

Objective: Convert a new position to account-currency notional, calculate its margin and include existing used margin.

Name: _____ Date: _____

This is a wholly hypothetical teaching exercise. An account currently has 5,000 USD equity and 1,000 USD used margin for positions already open. It considers adding a 0.50-lot EUR/USD position.

Use 100,000 EUR per standard lot, a fixed example price of 1.10 USD per EUR and a simple 30:1 leverage model. Required margin for the new position equals its USD notional divided by 30.

The account's equity stays unchanged on entry. There are no spread costs, commission, margin tiers, hedging offsets or other adjustments. A separate planned stop is 20 pips from entry, with a pip value of 10 USD per pip per standard lot.

Calculate account free margin immediately after adding the new position. Round the final USD result to two decimal places.

Decision: How do the new margin requirement and the planned stop-loss amount differ, and which margin amounts belong in the free-margin calculation?

My decision and reason

Calculation and units

One limit of this model

Source case (online feedback and answers): <https://forexmechanics.com/tools/decision-lab/#case=margin-risk>

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STUDENT WORKBOOK / E07 / APPROX. 5 MIN

Realised loss after an adverse fill

Objective: Use a supplied actual fill distance and count the stated round-trip commission once.

Name: _____ Date: _____

This is a wholly hypothetical teaching exercise. A 0.50-lot EUR/USD long has a planned stop 20 pips below entry. In the specified gap scenario, its actual closing price is 35 pips below entry.

The pip value is 10 USD per pip per standard lot. Round-trip commission is 7 USD per lot, charged once for the completed position.

The supplied entry-to-closing distance already uses the transaction prices in this scenario. No separate spread, additional slippage, financing or other cost is charged.

Calculate the total realised loss, including commission. Report a positive USD loss amount, rather than a signed P&L figure, and round to two decimal places.

Decision: Which distance should determine realised price-move loss, and should the planned stop distance be added to it?

My decision and reason

Calculation and units

One limit of this model

Source case (online feedback and answers): <https://forexmechanics.com/tools/decision-lab/#case=gap-execution>

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STUDENT WORKBOOK / E08 / APPROX. 5 MIN

Recovery from a drawdown

Objective: Calculate a recovery percentage using the capital remaining after a loss.

Name: _____ Date: _____

This is a wholly hypothetical teaching exercise. An account starts with 10,000 USD and loses 25% of that starting amount. There are no deposits, withdrawals or other cash flows.

Find the percentage gain, measured from the capital remaining after that loss, which would arithmetically restore the original 10,000 USD.

Ignore subsequent costs, taxes and inflation for this identity. Calculate the required recovery return to two decimal places. This task makes no claim about whether or when that return can be achieved.

Decision: Which amount belongs in the denominator when calculating the recovery return: starting capital or the capital remaining after the loss? Explain your choice.

My decision and reason

Calculation and units

One limit of this model

Source case (online feedback and answers): <https://forexmechanics.com/tools/decision-lab/#case=drawdown-recovery>

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STUDENT WORKBOOK / E09 / APPROX. 5 MIN

Net R across two partial exits

Objective: Weight partial-exit cash outcomes by volume and preserve the initial definition of one R.

Name: _____ Date: _____

This is a wholly hypothetical teaching exercise. A EUR/USD long starts with 1.00 lot at 1.1000 and an initial stop at 1.0980, a distance of 20 pips. Pip value is 10 USD per pip per standard lot.

Define 1R as the original full-position price-move risk at that initial stop, before commission. Close 0.50 lot at 1.1020, a gain of 20 pips, and the other 0.50 lot at 1.1040, a gain of 40 pips.

The round-trip commission for the entire original 1.00 lot is 7 USD in total. The supplied transaction prices already define the price distances. There are no additional price costs, financing or minimum-ticket fees.

Calculate the completed trade's net cash result and divide it by the original definition of 1R. Report net R to three decimal places.

Decision: How should the two partial outcomes and the total commission be combined without treating each half as a full-position trade?

My decision and reason

Calculation and units

One limit of this model

Source case (online feedback and answers): <https://forexmechanics.com/tools/decision-lab/#case=partial-exit>

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STUDENT WORKBOOK / E10 / APPROX. 5 MIN

Evaluating a frozen strategy on held-out trades

Objective: Calculate a descriptive holdout mean while keeping training selection separate from untouched evaluation.

Name: _____ Date: _____

This is a wholly hypothetical teaching exercise. Researchers try 100 strategy variations on one training set and select the variation with a training mean of +0.40R per trade.

They freeze that version's rules before observing five held-out trade outcomes: +1R, -1R, -1R, +0.5R, -1R. All five outcomes are already net, and all must be retained.

There are no additional cost deductions.

Calculate the observed mean net R per held-out trade, including its sign. Separately explain what a five-trade evaluation can and cannot establish, and what happens to its holdout status if the rules are tuned using these outcomes.

Decision: How should this selected training result and the five fresh outcomes be reported, and can these same five trades remain an untouched test after retuning on them?

My decision and reason

Calculation and units

One limit of this model

Source case (online feedback and answers): <https://forexmechanics.com/tools/decision-lab/#case=out-of-sample>

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