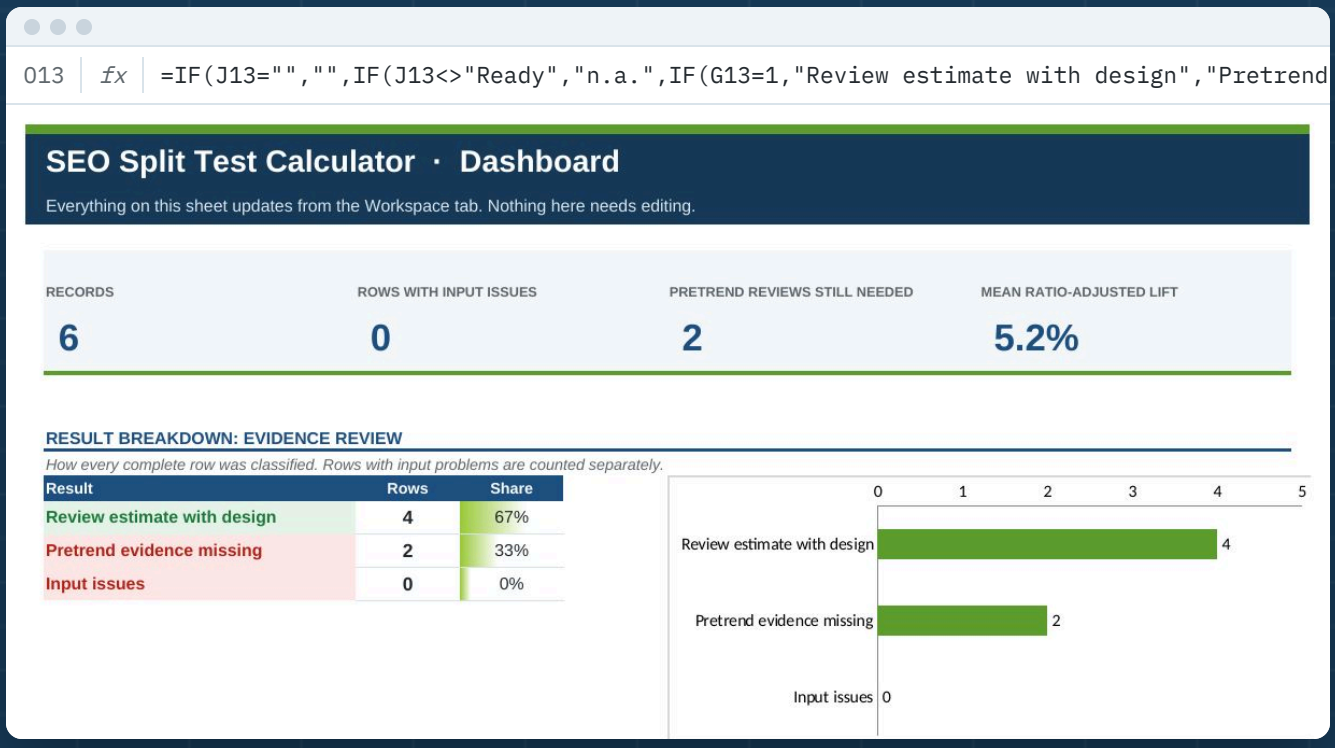
OptimizationTheory.com

SEO Business & Delivery Toolkit, resource 33

SEO Split Test Calculator

Estimate ratio-adjusted lift and difference-in-differences against matched control pages, with a pre-trend check.

Built for the DataForSEO API: Labs: Ranked Keywords



Field guide, v3.0, November 2026

Jourdan Rombough, optimizationtheory.com

What this template decides

Whether an SEO change moved traffic on treated pages relative to matched control pages, and whether the evidence supports reading the estimate.

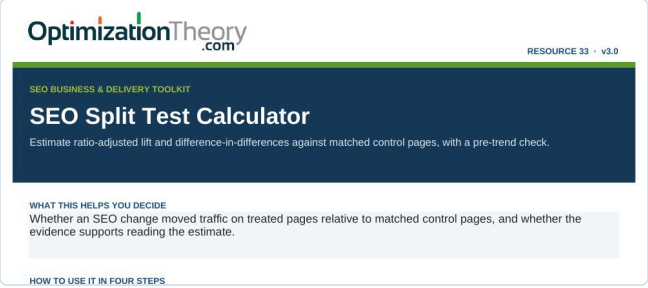
SEO changes don't happen in a vacuum. Between before and after, Google updates, seasons turn and competitors publish. The only fair way to estimate a change's impact is against pages that didn't get the change but would have moved the same way otherwise.

This SEO split testing template compares treatment and control groups before and after a change. It calculates each group's change, a ratio-adjusted lift and an additive difference-in-differences estimate, and only marks an experiment Review estimate with design when you've confirmed the groups trended in parallel beforehand.

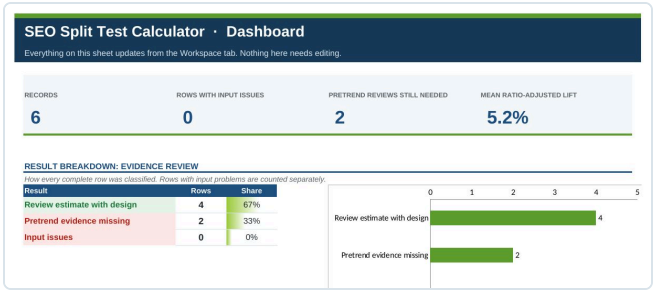
Who it's for

- SEOs running template or sitewide experiments
- Ecommerce teams testing category or product page changes
- Analysts who need defensible test reporting
- Teams without an SEO testing platform

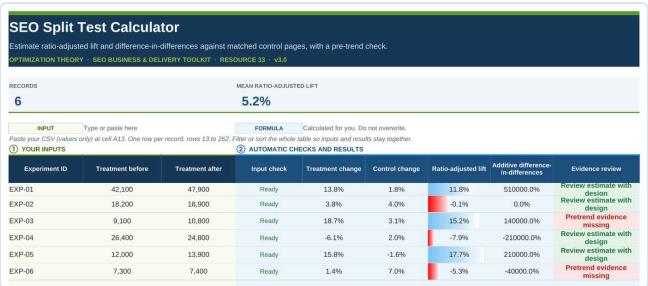
What's in the workbook



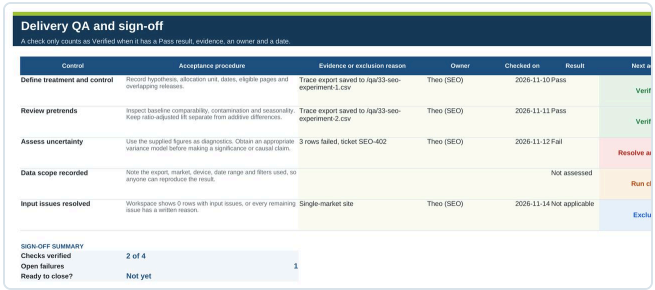
Start Here. Purpose, four-step setup and colour key.



Dashboard. KPIs, charts, Top 10 and an automatic action list.



Workspace. The working table, room for 250 rows.



Delivery QA. Evidence, owner and date for each validation step.

How the calculation works

Treatment change = after ÷ before – 1, same for control. Ratio-adjusted lift = (T after ÷ T before) ÷ (C after ÷ C before) – 1. Difference-in-differences = (T after – T before) – (C after – C before).

The key formula, as written in the workbook

```
=IF(J13="","",IF(J13<>"Ready","n.a.",IF(G13=1,"Review estimate with design","Pretrend evidence missing")))
```

Result column	Plain-English formula	What it tells you
Treatment change	Treatment after ÷ Treatment before-1	Relative change in the treatment group.
Control change	Control after ÷ Control before-1	Relative change in the control group.
Ratio-adjusted lift	(Treatment after ÷ Treatment before) ÷ (Control after ÷ Control before)-1	Treatment ratio divided by control ratio, minus one.
Additive difference-in-differences	(Treatment after-Treatment before)-(Control after-Control before)	Additive normalized outcome change net of control change.
Evidence review	IF(Pretrend reviewed=1,"Review estimate with design","Pretrend evidence missing")	Study-design reminder. No statistical significance is inferred.

The results you'll see

Review estimate with design Pretrend evidence missing

Green means the row meets the checks, red means fix it first, amber needs a human review and blue marks an opportunity. Rows with missing or out-of-range inputs show in the Input check column and are left out of the results until fixed.

How to use it, step by step

1

Split comparable pages

Randomly assign similar pages to treatment and control. Hundreds of pages per group is ideal.

2

Check the pre-period

Chart both groups for 6 to 8 weeks before the change. Mark parallel trends = 1 only if they moved together.

3

Ship the change to treatment only

Leave control untouched for the test window.

4

Read lift with the design in mind

Report the ratio-adjusted lift, note the evidence, and don't over-read small effects.



SEO Split Test Calculator

Estimate ratio-adjusted lift and difference-in-differences against matched control pages, with a pre-trend check.

OPTIMIZATION THEORY · SEO BUSINESS & DELIVERY TOOLKIT · RESOURCE 33 · v3.0

RECORDS 6

MEAN RATIO-ADJUSTED LIFT 5.2%

INPUT Type or paste here — FORMULA Calculated for you. Do not overwrite.

Paste your CSV (values only) at cell A13. One row per record, rows 13 to 262. Filter or sort the whole table so inputs and results stay together.

① YOUR INPUTS — ② AUTOMATIC CHECKS AND RESULTS

Experiment ID	Treatment before	Treatment after	Input check	Treatment change	Control change	Ratio-adjusted lift	Additive difference-in-differences	Evidence review
EXP-01	42,100	47,900	Ready	13.8%	1.8%	11.8%	510000.0%	Review estimate with design
EXP-02	18,200	18,900	Ready	3.8%	4.0%	-0.1%	0.0%	Review estimate with design
EXP-03	9,100	10,800	Ready	18.7%	3.1%	15.2%	140000.0%	Pretrend evidence missing
EXP-04	26,400	24,800	Ready	-6.1%	2.0%	-7.9%	-210000.0%	Review estimate with design
EXP-05	12,000	13,900	Ready	15.8%	-1.6%	17.7%	210000.0%	Review estimate with design
EXP-06	7,300	7,400	Ready	1.4%	7.0%	-5.3%	-40000.0%	Pretrend evidence missing

The Workspace tab with the worked example. Lime cells are inputs; blue cells are formulas.

Fill it with DataForSEO

This template is built to run on **DataForSEO Labs: Ranked Keywords**: every keyword a domain ranks for, with its ranking URL, position and volume.

DataForSEO supplies the URL or query list and the audit trail; you add the measurements listed below.

1. Request the data

```
POST https://api.dataforseo.com/v3/dataforseo_labs/google/ranked_keywords/live
[
  {
    "target": "yourdomain.com",
    "location_code": 2840,
    "language_code": "en",
    "limit": 1000
  }
]
```

2. Save the full JSON response

Save the complete response, not just the task ID, next to the template folder.

3. Convert it to the input CSV

The script in the Automation folder runs offline: no API call, no credentials.

```
python3 Automation/dataforseo_import.py import --template 33 --input response.json --output my-inputs.csv
```

Fills automatically	You add
Source reference (audit trail)	Experiment ID, Treatment before, Treatment after, Control before, Control after, Hypothesis, Pretrend reviewed, Evidence

Source reference fills automatically with the task ID, endpoint, location, language, device and snapshot time, so every row is traceable. Paste the finished CSV at Workspace cell A13. Estimate the cost first with the DataForSEO Cost Calculator (template 38).

Input dictionary

Keep the CSV columns in this order and paste values at Workspace cell A13. A missing observation stays blank; use 0 only for a measured zero or a verified No.

CSV field	Column	Meaning and rule	Typical source
`experiment_id`	Experiment ID	One hypothesis, treatment definition and fixed analysis window.	Your records or manual review
`treatment_before`	Treatment before	Clicks per URL per day, or another fixed normalized metric, before release.	Your records or manual review
`treatment_after`	Treatment after	Same normalized measure after release.	Your records or manual review
`control_before`	Control before	Same normalized measure for the matched control before release.	Your records or manual review
`control_after`	Control after	Same normalized measure for the matched control after release.	Your records or manual review
`hypothesis`	Hypothesis	Specific change and predicted mechanism.	Your records or manual review
`parallel_trends`	Pretrend reviewed	1 after checking whether pre-release trajectories are plausibly comparable. 1 = Yes, 0 = No.	Your records or manual review
`evidence`	Evidence	Link to a dated crawl, screenshot, ticket or source that another reviewer can inspect.	Your records or manual review
`source_ref`	Source reference	Task ID, export filename and observation scope. Retain the untouched source response separately. Optional.	DataForSEO: source_ref

The worked example

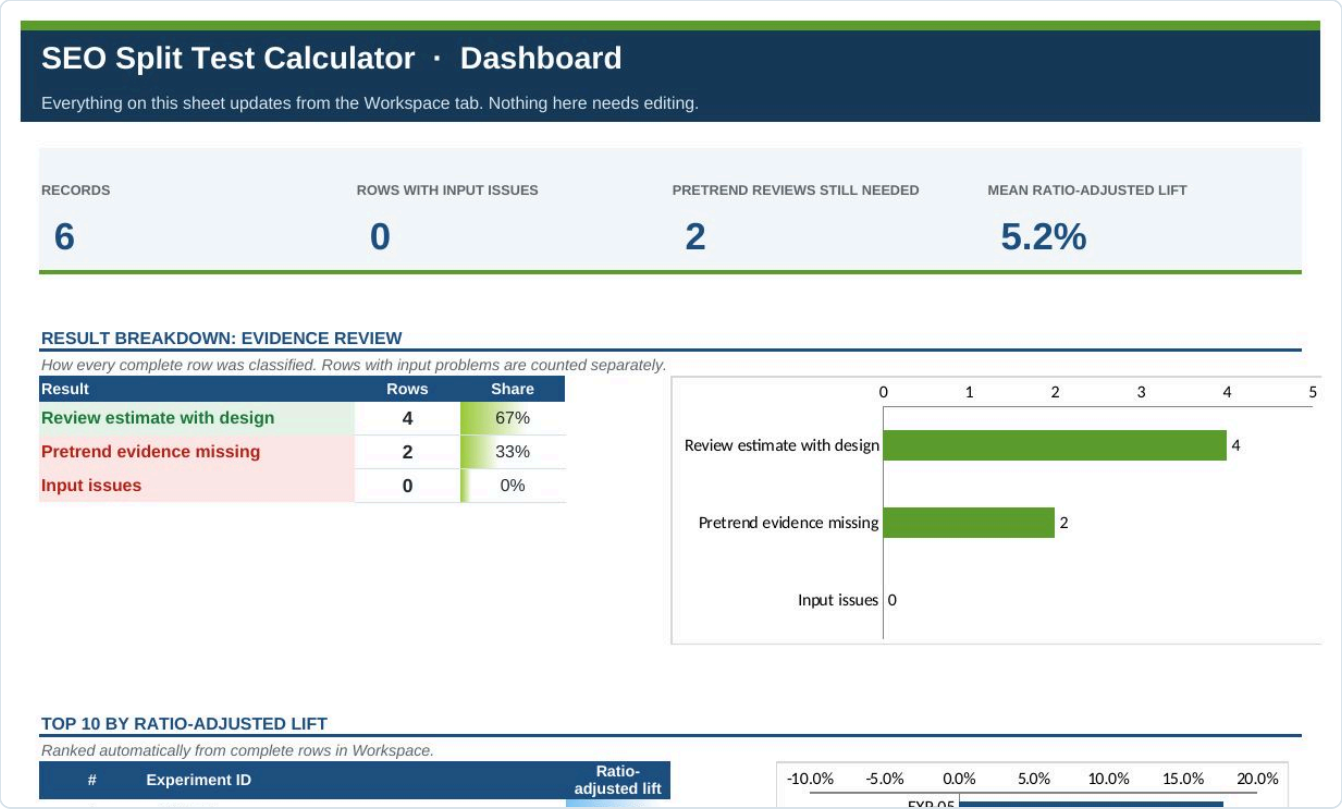
Every workbook ships filled with data from Northbeam Outdoor, a fictional outdoor-gear retailer. This one has 6 example rows.

6	0	2	5.2%
Records	Rows with input issues	Pretrend reviews still needed	Mean ratio-adjusted lift

The comparison-table experiment shows a solid lift with a checked pre-trend. Two experiments are flagged because no pre-period evidence was recorded, so their estimates shouldn't be reported yet.

Top 10 by ratio-adjusted lift

#	Experiment ID	Ratio-adjusted lift
1	EXP-05	17.7%
2	EXP-03	15.2%
3	EXP-01	11.8%
4	EXP-02	-0.1%
5	EXP-06	-5.3%



The Dashboard updates automatically from the Workspace tab.

Reading the result honestly

A positive estimate needs a credible control and enough stable observations. The workbook does not estimate a p-value.

Limits. Seasonality, spillovers and cohort changes can invalidate interpretation. Keywords and ranks help explain the result but do not establish causality.

Mistakes to avoid

Choosing control pages by hand. Hand-picked controls bias results. Randomize.

Skipping the pre-trend check. If the groups were already diverging, the estimate is meaningless.

Changing control pages mid-test. Any change to control contaminates the comparison.

Tips from the field

Use the title CTR test for snippet-only experiments.

Run tests long enough to cover weekly cycles, usually four weeks minimum.

Log every experiment here, including the ones that didn't work.

Questions people ask

What is SEO split testing?

Applying a change to a random group of similar pages and comparing their organic performance with an unchanged control group.

What is difference-in-differences?

A method that estimates impact as the change in the treatment group minus the change in the control group over the same period.

How many pages do I need for an SEO test?

Enough that random noise averages out, typically hundreds of pages with steady traffic per group.

Can I A/B test SEO on one page?

Not as a controlled test. Use before-and-after comparisons and label them descriptive.

Templates that work well with this one

Title Tag CTR Test Calculator

Compare two CTRs with a 95% interval and plain-English verdicts, so you don't ship a title change that was just noise.

Post-Migration SEO Monitoring Template

Compare each migrated segment with an untouched control so you can tell real migration loss from seasonality.

SEO ROI Calculator

Turn incremental sessions into revenue, contribution, net return and a break-even month against real SEO costs.

SEO Forecast Template

Project added clicks and contribution per keyword cluster with CTR, attainment and seasonality you can defend.

Content Decay Analysis Template

Separate lost impressions, lower CTR and falling demand, so you refresh the pages that really decayed.

SEO Roadmap Template

Sequence 90 days of SEO and GEO work by weighted opportunity per hour, dependencies and acceptance criteria.

Read the full tutorial online: **optimizationtheory.com/download-view/seo-split-test-calculator/**
Get all six templates in the **SEO Business & Delivery Toolkit**, or all 40 in the **Complete SEO & GEO Toolkit**.