

TWO-WAY FREQUENCY TABLES

One skill, start to finish: the IEP goal, six probe forms, the graph. Untimed. Fillable PDF.

TWO-WAY FREQUENCY TABLES Two-Way Frequency Tables – Goal and Directions

Goal, baseline, directions and benchmarks for one skill. Untimed; score is two-way table answers correct out of 10.

Ten two-way frequency table problems per form, the same fixed split every form: items 1-3 read one cell's own count, 4-5 read a row total, 6-7 read a column total, and 8-10 find a relative-frequency fraction. Every total is already printed on the table and every fraction is already in lowest terms, so there is never a rounding or reducing decision to make.

Sample goal — Invented; edit every bracket to fit the student
By [annual review date], when given 10 two-way frequency tables each asking for a cell count, a row or column total, or a relative-frequency fraction, [Student] will write the correct answer for [8 of 10] tables on [3] consecutive weekly probes, as measured by teacher-scored two-way frequency table probes.

BY (DATE) CRITERION (SCORE OUT OF 10, OR PERCENT)
GIVEN (CONDITION: WHAT IS SHOWN, ANY ALLOWED SUPPORT) ON ____ OF ____ CONSECUTIVE PROBES
STUDENT WILL (THE BEHAVIOR, IN THE WORDS OF THE PROBE) AS MEASURED BY (THIS PROBE: TWO-WAY FREQUENCY TABLES, FORMS A-F, PAGE 8-13)

Baseline: give Forms A, B and C on three days and take the middle score

BENCHMARK	TARGET DATE	TARGET SCORE	ACTUAL SCORE	MEET?
BASILINE PROBE 1				
BASILINE PROBE 2				
BASILINE PROBE 3				
MEDIAN (THE BASILINE)				

Benchmarks toward the goal

Giving and scoring the probe

☐ Say: "Read the table. Answer the question. Write the answer in the box."
☐ Correct: the exact number for a count or total, or the exact fraction for a fraction question.
☐ Every table already prints its row and column totals — the student reads them, never calculates a row total.

My name: _____ Date: _____

Read the table. Write the answer in the box.

ROW AND COLUMN TOTALS ARE ALREADY PRINTED IN THE SHADED TOTAL ROW AND COLUMN. WRITE THE ANSWER IN THE BOX

- TABLE** In a survey about weekend plan, how many 3rd-grade students chose Games? →
- TABLE** In a survey about weekend plan, how many 6th-grade students chose Games? →
- TABLE** In a survey about weekend plan, how many 4th-grade students chose Books? →
- TABLE** In a survey about lunch choice, how many students in all chose Pizza? →
- TABLE** In a survey about field trip vote, how many students in all chose Museum? →
- TABLE** In a survey about weekend plan, how many 4th-grade students are in the survey in all? →
- TABLE** In a survey about recess game, how many 5th-grade students are in the survey in all? →
- TABLE** In a survey about field trip vote, what fraction of the students who chose Museum are in 4th grade? →
- TABLE** In a survey about recess game, what fraction of the students who chose Games are in 4th grade? →

TWO-WAY FREQUENCY TABLES Two-Way Frequency Tables – Data Log and Graph

One row per probe. Three points in a row under the aim line is a decision, not a feeling: change the teaching and write what changed in the notes.

STUDENT CRITERION / AIM GOAL DATE

CORRECT OUT OF 10 - DRAW THE AIM LINE FROM THE BASELINE TO THE CRITERION FIRST, THEN PLOT EACH WEEK

WEEK	1	2	3	4	5	6	7	8	9	10	11	12
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												

Probe (week)

DATE	FORM	CORRECT	ERRORS	SCORE USED ON GRAPH	NOTES (CONDITIONS, WHAT WAS RETEACHED)

TWO-WAY FREQUENCY TABLES Two-Way Frequency Tables – Caseload Summary

Every student on this goal, on one grid. Twelve rows, eight probes, one decision column.

TEACHER / CASE MANAGER SKILL (AS THE GOAL WORDS IT) MARKING PERIOD

STUDENT	BASILINE	CRITERION	P1	P2	P3	P4	P5	P6	P7	P8	TREND	DECISION THIS MONTH

How to fill it

☐ One row per student who has a goal on this skill.
Baseline is the median of the first three probes.
☐ One column per weekly probe; write the score out of 10, not a percent, so the rows compare.
☐ Trend up, flat or down over the last four probes.
That word, not the last score, is what the decision

What it is for

Grouping: When six students sit on the same goal, the individual graphs answer "how is this child doing" and nothing answers "who needs the same fifteen minutes." Rows that are flat together are a group; a row that is flat alone is a different question. Take this page to the data meeting instead of ten

EXAMPLE A Filled-In Data Log (Invented Student)

Priya is invented. Twelve weekly probes on two-way frequency tables, the aim line, the change that three low points forced, and the criterion being met.

The goal, as written for Priya, seventh grade (invented)
By May 20, when given 10 two-way frequency tables each asking for a cell count, a row or column total, or a relative-frequency fraction, Priya will write the correct answer for 8 of 10 tables on 3 consecutive weekly probes, as measured by teacher-scored two-way frequency table probes (Forms A-F).

#	DATE	FORM	CORRECT	ERRORS	GRAPHED	NOTES
1	8/8	A	3	7	3	baseline
2	8/9	B	4	6	4	baseline
3	8/10	C	3	7	3	baseline (median of 3, 4, 3 = 3)
4	9/17	D	2	8	2	read every cell and total correctly but used the grand total instead of the row or column total; the question named as the denominator on the fraction items
5	9/24	E	3	7	3	same pattern
6	10/1	F	2	8	2	2 under aim line: circled the row or column total; the question named before writing any fraction
7	10/8	A	5	5	5	—
8	10/15	B	6	4	6	—
9	10/22	C	7	3	7	errors narrowing to one pattern
10	10/29	D	7	3	7	—
11	11/5	E	8	2	8	criterion met, 1 of 3
12	11/12	F	8	2	8	criterion met, 2 of 3

How to read the log

☐ Baseline was the median of three forms on three days: 3, 4, 3, so 3. Not the average, not the best.
☐ The aim line runs from 3 in week 1 to 8 at the goal date. Probes 4, 5 and 6 (2, 3, 2) sit under it: three in a row, so the teaching changed and the change is written on the row.
☐ The notes name the pattern, not just the count: "read every cell and total correctly but used the grand total instead of the row or column total; the question named as the denominator on the fraction items" is what sent the teaching somewhere specific, and a score on its own would not have said that.
☐ Criterion met on probes 11 and 12; one more consecutive probe at 8 or better and the goal is met.

PROGRESS MONITORING How This Pack Works

Goal, baseline, weekly probe, graph, decision. Six steps, one skill.

A progress monitoring goal needs a thing to count and a page to count it on. This file is both, for one skill: a goal written in the probe's own words, 6 equivalent forms of the probe that measures it, and a graph scaled to it. Nothing has to be built or found.

- Baseline:** Give Forms A, B and C on three different days. The middle score of the three is the baseline; write it on the goal page.
- Write the goal** from the six-part frame on the goal page. Start from the sample and change every bracket: the date, the condition, the criterion, the number of probes.
- Probe once a week** with the forms in rotation (A, B, C, D, E, F, A, ...). Never the same form two weeks running. Every form is ten items, untimed. Score it against the answer key (pages 16-17).
- Log and plot** the score the same day. Draw the aim line first, from the baseline on the left to the criterion at the goal date on the right, then plot each week's dot.
- Decide from the graph.** Three dots in a row under the aim line: change the teaching this week and write the change on the log. Three in a row over it: raise the target.
- Report from the log.** The log gives the progress report its numbers: baseline, the last two scores, and what the errors keep landing on.

The weekly routine, about five minutes

☐ Monday: pull the next form in the rotation (A, B, C, D, E, F, A, ...).
☐ Any day: give the probe one-to-one, untimed; ten items takes a few minutes.
☐ Same day: score it, log the row, plot the point, look at the last three points.
☐ Friday: if three points sit under the aim line, write the change you are making on the log.

Print and prep

☐ Print one copy per student per week: the student writes on the form and that same sheet is the one you score.
☐ The forms are student sheets with nothing on them but the problems. The answer key and the Correct ____ / 10 box for every form are on pages 16 and 17; score there, then log it.
☐ Keep the goal page and the graph page for each student at the front of the data folder; type into them or write on them.
☐ The caseload page is one grid for every student on this goal; print it once a month.

What this probe is not

Equivalent forms, and why it matters

Goal, baseline, weekly probe, graph, decision. Six steps, one skill.

A progress monitoring goal needs a thing to count and a page to count it on. This file is both, for one skill: a goal written in the probe's own words, 6 equivalent forms of the probe that measures it, and a graph scaled to it. Nothing has to be built or found.

- 1 **Baseline.** Give Forms A, B and C on three different days. The middle score of the three is the baseline; write it on the goal page.
- 2 **Write the goal** from the six-part frame on the goal page. Start from the sample and change every bracket: the date, the condition, the criterion, the number of probes.
- 3 **Probe once a week** with the forms in rotation (A, B, C, D, E, F, A...). Never the same form two weeks running. Every form is ten items, untimed. Score it against the answer key (pages 16–17).
- 4 **Log and plot** the score the same day. Draw the aim line first, from the baseline on the left to the criterion at the goal date on the right, then plot each week's dot.
- 5 **Decide from the graph.** Three dots in a row under the aim line: change the teaching this week and write the change on the log. Three in a row over it: raise the target.
- 6 **Report from the log.** The log gives the progress report its numbers: baseline, the last two scores, and what the errors keep landing on.

The weekly routine, about five minutes

- ☐ Monday: pull the next form in the rotation (A, B, C, D, E, F, A...).
- ☐ Any day: give the probe one-to-one, untimed; ten items takes a few minutes.
- ☐ Same day: score it, log the row, plot the point, look at the last three points.
- ☐ Friday: if three points sit under the aim line, write the change you are making on the log.

Print and prep

- ☐ Print one copy per student per week: the student writes on the form and that same sheet is the one you score.
- ☐ The forms are student sheets with nothing on them but the problems. The answer key and the Correct ____ / 10 box for every form are on pages 16 and 17; score there, then log it.
- ☐ Keep the goal page and the graph page for each student at the front of the data folder; type into them or write on them.
- ☐ The caseload page is one grid for every student on this goal: print it once a month.

What this probe is not

It is not a norm-referenced test and it carries no benchmark score. The sample goal uses invented criteria in brackets; your team sets the real ones from the baseline and the student's IEP. Every form is untimed and ten items long, so a score of 8 means the same thing on every form, and a student is never scored on speed.

Equivalent forms, and why it matters

Every form has ten items drawn the same way, from one shuffle of the same bank, and no item appears on two forms — 60 different items across the six forms. A score on one form means the same as a score on another, so the line on the graph is the student, not the paper. Rotate the forms and the page cannot be memorized.

Two-Way Frequency Tables — Goal and Directions

Goal, baseline, directions and benchmarks for one skill. Untimed; score is two-way table answers correct out of 10.

Ten two-way frequency table problems per form, the same fixed split every form: items 1-3 read one cell's own count, 4-5 read a row total, 6-7 read a column total, and 8-10 find a relative-frequency fraction. Every total is already printed on the table and every fraction is already in lowest terms, so there is never a rounding or reducing decision to make.

Sample goal — invented; edit every bracket to fit the student

By [annual review date], when given 10 two-way frequency tables each asking for a cell count, a row or column total, or a relative-frequency fraction, [Student] will write the correct answer for [8 of 10] tables on [3] consecutive weekly probes, as measured by teacher-scored two-way frequency table probes.

BY (DATE)

CRITERION (SCORE OUT OF 10, OR PERCENT)

GIVEN (CONDITION: WHAT IS SHOWN, ANY ALLOWED SUPPORT)

ON ____ OF ____ CONSECUTIVE PROBES

STUDENT WILL (THE BEHAVIOR, IN THE WORDS OF THE PROBE)

AS MEASURED BY (THIS PROBE: TWO-WAY FREQUENCY TABLES, FORMS A-F, PAGE 6-11)

Baseline: give Forms A, B and C on three days and take the middle score

BASILINE PROBE 1	BASILINE PROBE 2	BASILINE PROBE 3	MEDIAN (THE BASELINE)

Benchmarks toward the goal

BENCHMARK	TARGET DATE	TARGET SCORE	ACTUAL SCORE	MET?

Giving and scoring the probe

- ☐ Say: "Read the table. Answer the question. Write the answer in the box."
- ☐ Correct: the exact number for a count or total, or the exact fraction for a fraction question.
- ☐ Every table already prints its row and column totals — the student reads them, never calculates a new total.
- ☐ Untimed. Let the student finish all ten.

Scoring rules for this student (accepted answers, reversals, supports allowed)

.....

.....

What the errors say to reteach (carry over from the log)

.....

.....

My name: _____

Date: _____



Read the table. Write the answer in the box.

ROW AND COLUMN TOTALS ARE ALREADY PRINTED IN THE SHADED TOTAL ROW AND COLUMN · WRITE THE ANSWER IN THE BOX

1. TABLE

	3rd	4th	Total
Books	8	3	11
Games	9	9	18
Total	17	12	29

In a survey about weekend plan, how many 3rd-grade students chose Games?

→

2. TABLE

	5th	6th	Total
Books	3	3	6
Games	9	2	11
Total	12	5	17

In a survey about weekend plan, how many 6th-grade students chose Games?

→

3. TABLE

	3rd	4th	Total
Books	9	2	11
Games	8	4	12
Total	17	6	23

In a survey about weekend plan, how many 4th-grade students chose Books?

→

4. TABLE

	3rd	4th	Total
Pizza	5	7	12
Salad	3	6	9
Total	8	13	21

In a survey about lunch choice, how many students in all chose Pizza?

→

5. TABLE

	3rd	4th	Total
Zoo	2	7	9
Museum	9	2	11
Total	11	9	20

In a survey about field trip vote, how many students in all chose Museum?

→

6. TABLE

	4th	5th	Total
Books	3	9	12
Games	5	5	10
Total	8	14	22

In a survey about weekend plan, how many 4th-grade students are in the survey in all?

→

7. TABLE

	5th	6th	Total
Soccer	3	9	12
Tag	7	4	11
Total	10	13	23

In a survey about recess game, how many 5th-grade students are in the survey in all?

→

8. TABLE

	4th	5th	Total
Zoo	7	6	13
Museum	4	9	13
Total	11	15	26

In a survey about field trip vote, what fraction of the students who chose Museum are in 4th grade?

→

9. TABLE

	3rd	4th	Total
Soccer	4	5	9
Tag	3	7	10
Total	7	12	19

In a survey about recess game, what fraction of the 4th-grade students chose Tag?

→

10. TABLE

	5th	6th	Total
Soccer	2	3	5
Tag	3	7	10
Total	5	10	15

In a survey about recess game, what fraction of the students who chose Tag are in 5th grade?

→

My name: _____

Date: _____

**Read the table. Write the answer in the box.**

ROW AND COLUMN TOTALS ARE ALREADY PRINTED IN THE SHADED TOTAL ROW AND COLUMN · WRITE THE ANSWER IN THE BOX

1. **TABLE**

	3rd	4th	Total
Zoo	6	5	11
Museum	8	5	13
Total	14	10	24

In a survey about field trip vote, how many 4th-grade students chose Museum?

→

2. **TABLE**

	4th	5th	Total
Soccer	5	2	7
Tag	3	3	6
Total	8	5	13

In a survey about recess game, how many 4th-grade students chose Soccer?

→

3. **TABLE**

	5th	6th	Total
Soccer	2	3	5
Tag	6	3	9
Total	8	6	14

In a survey about recess game, how many 5th-grade students chose Soccer?

→

4. **TABLE**

	5th	6th	Total
Summer	4	3	7
Winter	3	9	12
Total	7	12	19

In a survey about favorite season, how many students in all chose Winter?

→

5. **TABLE**

	4th	5th	Total
Summer	4	3	7
Winter	4	7	11
Total	8	10	18

In a survey about favorite season, how many students in all chose Winter?

→

6. **TABLE**

	4th	5th	Total
Soccer	3	8	11
Tag	5	8	13
Total	8	16	24

In a survey about recess game, how many 4th-grade students are in the survey in all?

→

7. **TABLE**

	4th	5th	Total
Books	3	8	11
Games	4	4	8
Total	7	12	19

In a survey about weekend plan, how many 4th-grade students are in the survey in all?

→

8. **TABLE**

	5th	6th	Total
Pizza	7	3	10
Salad	2	4	6
Total	9	7	16

In a survey about lunch choice, what fraction of the 6th-grade students chose Pizza?

→

9. **TABLE**

	3rd	4th	Total
Summer	5	7	12
Winter	9	8	17
Total	14	15	29

In a survey about favorite season, what fraction of the 3rd-grade students chose Winter?

→

10. **TABLE**

	4th	5th	Total
Summer	3	9	12
Winter	6	5	11
Total	9	14	23

In a survey about favorite season, what fraction of the 5th-grade students chose Summer?

→

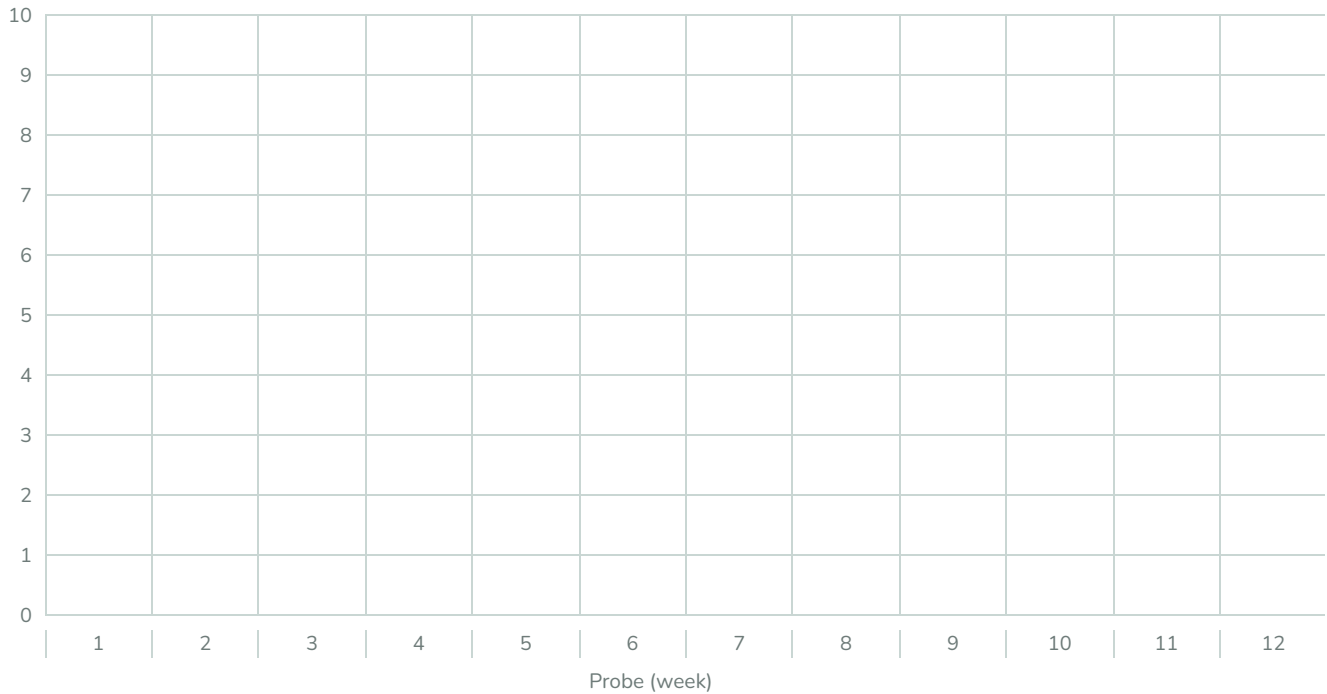
One row per probe. Three points in a row under the aim line is a decision, not a feeling: change the teaching and write what changed in the notes.

STUDENT

CRITERION / AIM

GOAL DATE

CORRECT OUT OF 10 · DRAW THE AIM LINE FROM THE BASELINE TO THE CRITERION FIRST, THEN PLOT EACH WEEK



#	DATE	FORM	CORRECT	ERRORS	SCORE USED ON GRAPH	NOTES (CONDITIONS, WHAT WAS RETEACHED)

Every student on this goal, on one grid. Twelve rows, eight probes, one decision column.

TEACHER / CASE MANAGER

SKILL (AS THE GOAL WORDS IT)

MARKING PERIOD

STUDENT	BASELINE	CRITERION	P1	P2	P3	P4	P5	P6	P7	P8	TREND	DECISION THIS MONTH

How to fill it

- ☐ One row per student who has a goal on this skill. Baseline is the median of the first three probes.
- ☐ One column per weekly probe; write the score out of 10, not a percent, so the rows compare.
- ☐ Trend: up, flat or down over the last four probes. That word, not the last score, is what the decision follows.
- ☐ Decision: keep going, change the teaching, or raise the target. A blank decision on a flat row is the thing this page exists to catch.

What it is for

Grouping. When six students sit on the same goal, the individual graphs answer “how is this child doing” and nothing answers “who needs the same fifteen minutes.” Rows that are flat together are a group; a row that is flat alone is a different question. Take this page to the data meeting instead of ten folders.

EXAMPLE

A Filled-In Data Log (Invented Student)

Priya is invented. Twelve weekly probes on two-way frequency tables, the aim line, the change that three low points forced, and the criterion being met.

The goal, as written for Priya, seventh grade (invented)

By May 20, when given 10 two-way frequency tables each asking for a cell count, a row or column total, or a relative-frequency fraction, Priya will write the correct answer for 8 of 10 tables on 3 consecutive weekly probes, as measured by teacher-scored two-way frequency table probes (forms A–F).

#	DATE	FORM	CORRECT	ERRORS	GRAPHED	NOTES
1	9/8	A	3	7	3	baseline
2	9/9	B	4	6	4	baseline
3	9/10	C	3	7	3	baseline (median of 3, 4, 3 = 3)
4	9/17	D	2	8	2	read every cell and total correctly but used the grand total instead of the row or column total the question named as the denominator on the fraction items
5	9/24	E	3	7	3	same pattern
6	10/1	F	2	8	2	3 under aim line: circled the row or column total the question named before writing any fraction
7	10/8	A	5	5	5	–
8	10/15	B	6	4	6	–
9	10/22	C	7	3	7	errors narrowing to one pattern
10	10/29	D	7	3	7	–
11	11/5	E	8	2	8	criterion met, 1 of 3
12	11/12	F	8	2	8	criterion met, 2 of 3

How to read the log

- ☐ Baseline was the median of three forms on three days: 3, 4, 3, so 3. Not the average, not the best.
- ☐ The aim line runs from 3 in week 1 to 8 at the goal date. Probes 4, 5 and 6 (2, 3, 2) sat under it: three in a row, so the teaching changed and the change is written on the row.
- ☐ The notes name the pattern, not just the count: “read every cell and total correctly but used the grand total instead of the row or column total the question named as the denominator on the fraction items” is what sent the teaching somewhere specific, and a score on its own would not have said that.
- ☐ Criterion met on probes 11 and 12; one more consecutive probe at 8 or better and the goal is met.

The progress report sentence this log produces

“On weekly two-way frequency tables probes (10 items, untimed), Priya scored 3 of 10 at baseline in September and 8 of 10 on each of the two most recent probes in November. Progress is sufficient to meet the goal of 8 of 10 on three consecutive probes by May.” Every number in it is on the log above; nothing is from memory.