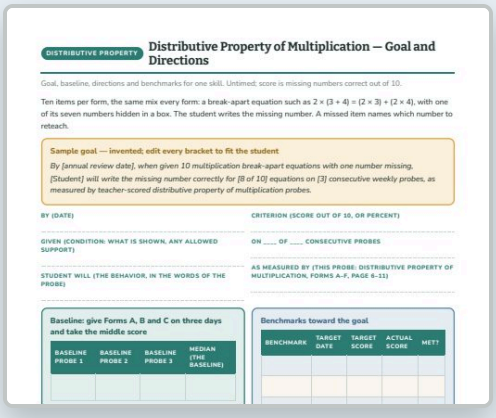
SPECIAL EDUCATION

EDITABLE

DISTRIBUTIVE PROPERTY OF MULTIPLICATION

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


DISTRIBUTIVE PROPERTY

Distributive Property of Multiplication — Goal and Directions

Goal, baseline, directions and benchmarks for one skill. Untimed; score is missing numbers correct out of 10.

Ten items per form, the same mix every form: a break-apart equation such as 2 × (3 + 4) = (2 × 3) + (2 × 4), with one of its seven numbers hidden in a box. The student writes the missing number. A missed item names which number to reteach.

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

By [annual review date], when given 10 multiplication break-apart equations with one number missing, [Student] will write the missing number correctly for [8 of 10] equations on [3] consecutive weekly probes, as measured by teacher-scored distributive property of multiplication 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)

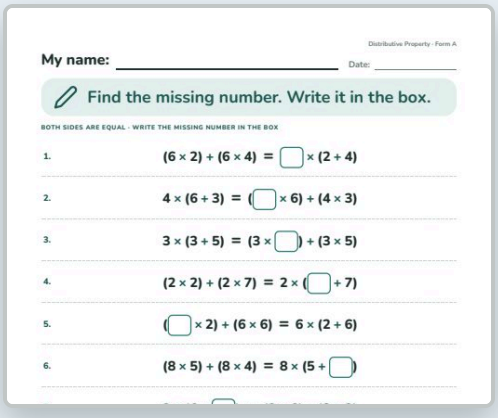
AS MEASURED BY (THIS PROBE: DISTRIBUTIVE PROPERTY OF MULTIPLICATION, FORMS A–F, PAGE 6–11)

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

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

Benchmarks toward the goal

BENCHMARK	TARGET DATE	TARGET SCORE	ACTUAL SCORE	MET?

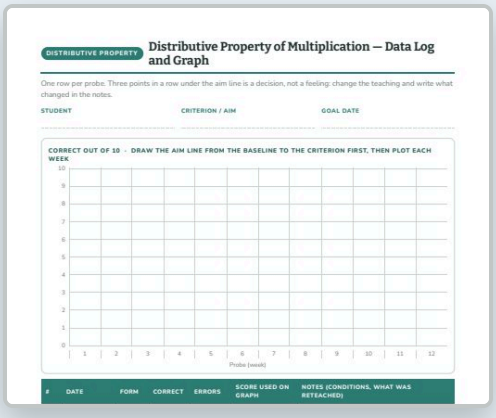

Distributive Property · Form A

My name: _____ Date: _____

Find the missing number. Write it in the box.

BOTH SIDES ARE EQUAL · WRITE THE MISSING NUMBER IN THE BOX

1. (6 × 2) + (6 × 4) = ☐ × (2 + 4)
2. 4 × (6 + 3) = (☐ × 6) + (4 × 3)
3. 3 × (3 + 5) = (3 × ☐) + (3 × 5)
4. (2 × 2) + (2 × 7) = 2 × (☐ + 7)
5. (☐ × 2) + (6 × 6) = 6 × (2 + 6)
6. (8 × 5) + (8 × 4) = 8 × (5 + ☐)


DISTRIBUTIVE PROPERTY

Distributive Property of Multiplication — 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

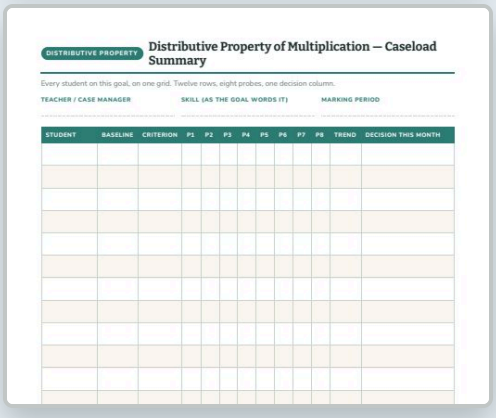
CRITERION / AIM

GOAL DATE

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

Probe (week)

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


DISTRIBUTIVE PROPERTY

Distributive Property of Multiplication — Caseload Summary

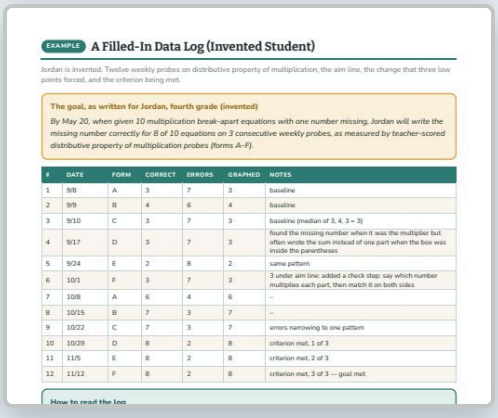
Every student on this goal, on one grid. Twelve rows, eight probes, one decision column.

TEACHER / CASE MANAGER

SKILL (AS THE GOAL WORDS IT)

MARKING PERIOD

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


EXAMPLE

A Filled-In Data Log (Invented Student)

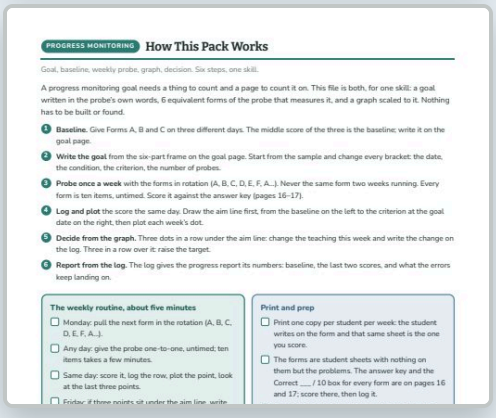
Jordan is invented. Twelve weekly probes on distributive property of multiplication, the aim line, the change that three low points forced, and the criterion being met.

The goal, as written for Jordan, fourth grade (invented)

By May 20, when given 10 multiplication break-apart equations with one number missing, Jordan will write the missing number correctly for 8 of 10 equations on 3 consecutive weekly probes, as measured by teacher-scored distributive property of multiplication 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	3	7	3	found the missing number when it was the multiplier but often wrote the sum instead of one part when the box was inside the parentheses
5	9/24	E	2	8	2	same pattern
6	10/1	F	3	7	3	3 under aim line: added a check step: say which number multiplies each part, then match it on both sides
7	10/8	A	6	4	6	–
8	10/15	B	7	3	7	–
9	10/22	C	7	3	7	errors narrowing to one pattern
10	10/29	D	8	2	8	criterion met, 1 of 3
11	11/5	E	8	2	8	criterion met, 2 of 3
12	11/12	F	8	2	8	criterion met, 3 of 3 — goal met

How to read the log


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.

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

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.

Fillable PDF | **18 Pages** | **Six Probe Forms** | **Goal + Graph**

BRIGHT PATH SPED

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.

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's criteria are invented and bracketed; your team sets the real ones. Every form is untimed and ten items long.

Equivalent forms, and why it matters

Every form has ten items: a break-apart equation with one of its seven numbers hidden, the factored side first on five and last on five. No equation repeats 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.

© Bright Path Sped · Single-classroom license

DISTRIBUTIVE PROPERTY

Distributive Property of Multiplication — Goal and Directions

Goal, baseline, directions and benchmarks for one skill. Untimed; score is missing numbers correct out of 10.

Ten items per form, the same mix every form: a break-apart equation such as 2 × (3 + 4) = (2 × 3) + (2 × 4), with one of its seven numbers hidden in a box. The student writes the missing number. A missed item names which number to reteach.

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

By [annual review date], when given 10 multiplication break-apart equations with one number missing, [Student] will write the missing number correctly for [8 of 10] equations on [3] consecutive weekly probes, as measured by teacher-scored distributive property of multiplication 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: DISTRIBUTIVE PROPERTY OF MULTIPLICATION, FORMS A–F, PAGE 6–11)

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

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

Benchmarks toward the goal

BENCHMARK	TARGET DATE	TARGET SCORE	ACTUAL SCORE	MET?

Giving and scoring the probe

- ☐ Say: “Both sides of each equation are equal. Find the missing number and write it in the box.”
- ☐ Correct: the one missing number. The student does not need to find the products.
- ☐ 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)

© Bright Path Sped · Single-classroom license

My name: _____ Date: _____

Find the missing number. Write it in the box.

BOTH SIDES ARE EQUAL · WRITE THE MISSING NUMBER IN THE BOX

1. $(6 \times 2) + (6 \times 4) = \square \times (2 + 4)$

2. $4 \times (6 + 3) = (\square \times 6) + (4 \times 3)$

3. $3 \times (3 + 5) = (3 \times \square) + (3 \times 5)$

4. $(2 \times 2) + (2 \times 7) = 2 \times (\square + 7)$

5. $(\square \times 2) + (6 \times 6) = 6 \times (2 + 6)$

6. $(8 \times 5) + (8 \times 4) = 8 \times (5 + \square)$

7. $3 \times (6 + \square) = (3 \times 6) + (3 \times 3)$

8. $6 \times (\square + 5) = (6 \times 3) + (6 \times 5)$

9. $(2 \times 2) + (2 \times \square) = 2 \times (2 + 3)$

10. $\square \times (2 + 7) = (8 \times 2) + (8 \times 7)$

© Bright Path Sped

My name: _____ Date: _____

Find the missing number. Write it in the box.

BOTH SIDES ARE EQUAL · WRITE THE MISSING NUMBER IN THE BOX

1. $(\square \times 2) + (9 \times 5) = 9 \times (2 + 5)$

2. $2 \times (5 + 4) = (\square \times 5) + (2 \times 4)$

3. $(7 \times 2) + (\square \times 4) = 7 \times (2 + 4)$

4. $9 \times (2 + 3) = (9 \times 2) + (\square \times 3)$

5. $3 \times (4 + \square) = (3 \times 4) + (3 \times 2)$

6. $(9 \times \square) + (9 \times 2) = 9 \times (3 + 2)$

7. $(5 \times 2) + (5 \times 8) = 5 \times (2 + \square)$

8. $6 \times (4 + 3) = (6 \times \square) + (6 \times 3)$

9. $(3 \times 4) + (3 \times 5) = 3 \times (\square + 5)$

10. $4 \times (2 + 6) = (4 \times 2) + (4 \times \square)$

© Bright Path Sped

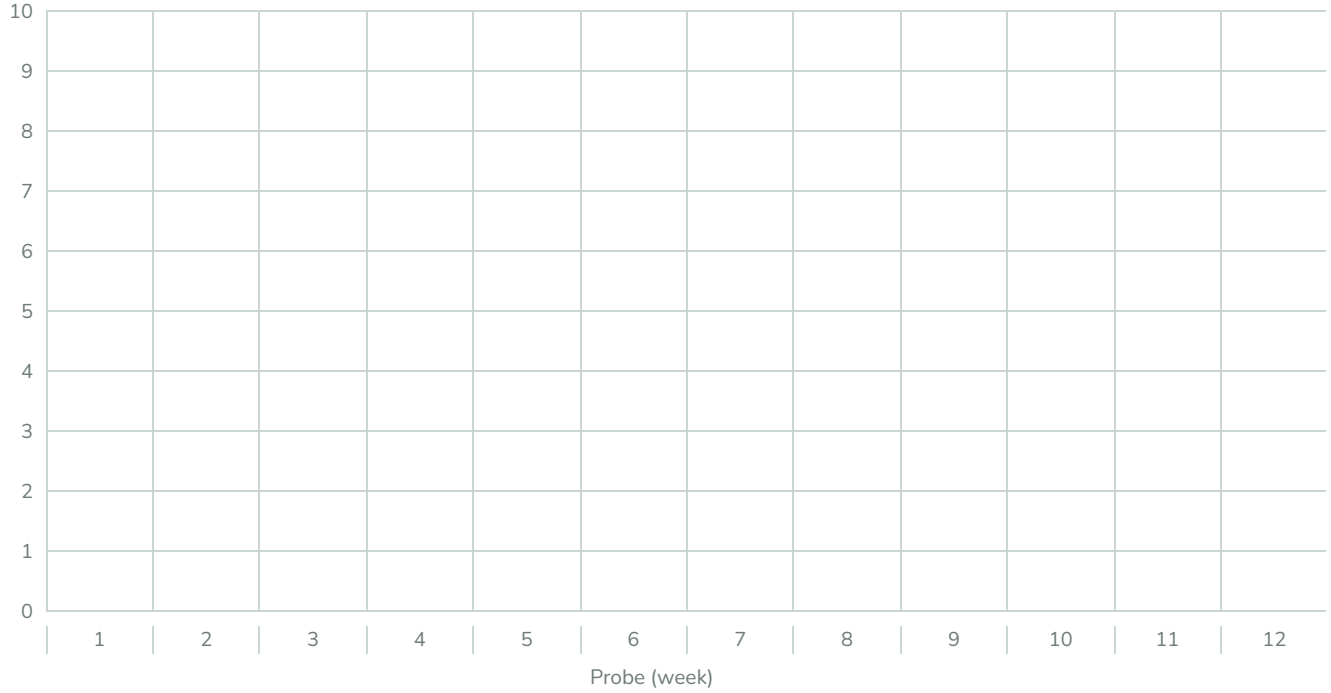
DISTRIBUTIVE PROPERTY

Distributive Property of Multiplication — 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



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

© Bright Path Sped · Single-classroom license

DISTRIBUTIVE PROPERTY

Distributive Property of Multiplication — 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	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.

© Bright Path Sped · Single-classroom license

EXAMPLE A Filled-In Data Log (Invented Student)

Jordan is invented. Twelve weekly probes on distributive property of multiplication, the aim line, the change that three low points forced, and the criterion being met.

The goal, as written for Jordan, fourth grade (invented)

By May 20, when given 10 multiplication break-apart equations with one number missing, Jordan will write the missing number correctly for 8 of 10 equations on 3 consecutive weekly probes, as measured by teacher-scored distributive property of multiplication 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	3	7	3	found the missing number when it was the multiplier but often wrote the sum instead of one part when the box was inside the parentheses
5	9/24	E	2	8	2	same pattern
6	10/1	F	3	7	3	3 under aim line: added a check step: say which number multiplies each part, then match it on both sides
7	10/8	A	6	4	6	–
8	10/15	B	7	3	7	–
9	10/22	C	7	3	7	errors narrowing to one pattern
10	10/29	D	8	2	8	criterion met, 1 of 3
11	11/5	E	8	2	8	criterion met, 2 of 3
12	11/12	F	8	2	8	criterion met, 3 of 3 — goal met

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 (3, 2, 3) 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: “found the missing number when it was the multiplier but often wrote the sum instead of one part when the box was inside the parentheses” is what sent the teaching somewhere specific, and a score on its own would not have said that.
- [ ] Criterion was met on probes 10, 11 and 12 — three in a row at 8 of 10 or better — so the goal was already met by probe 12, not merely approached.

The progress report sentence this log produces

“On weekly distributive property of multiplication probes (10 items, untimed), Jordan scored 3 of 10 at baseline in September and met the goal of 8 of 10 on three consecutive probes by 11/12.” Every number in it is on the log above; nothing is from memory.

© Bright Path Sped · Single-classroom license