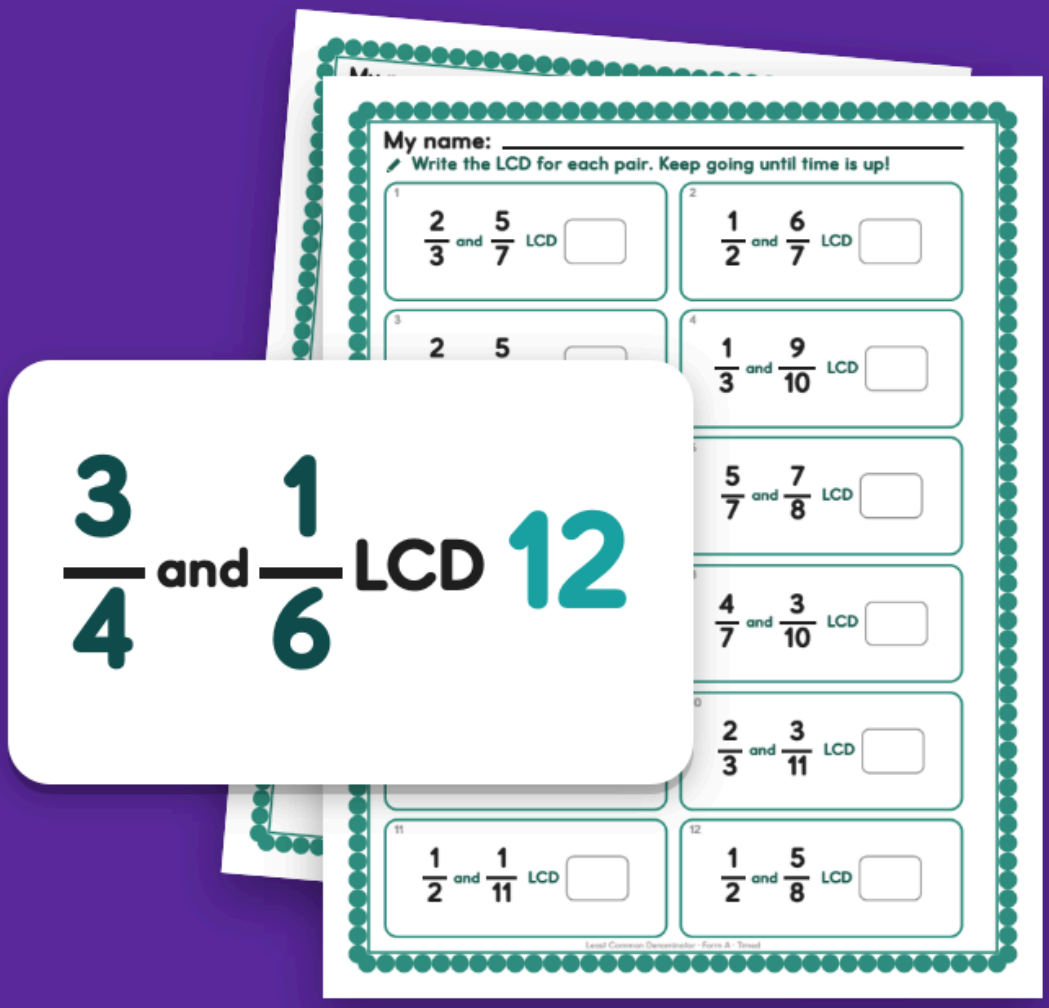
LEAST COMMON DENOMINATOR PROBES

GRADES 4-6: IEP PROGRESS MONITORING

6 FORMS

ANSWER KEYS + GRAPH



Bright Path Sped

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This is a fillable PDF

- Open it in a PDF reader (Adobe Acrobat Reader, Preview, or your browser), click into a line or box, type, and Save As once per student.
- Print one copy per student per week: the student writes on the form and that same sheet is the one you score.
- It works offline. No account, no subscription, no internet connection needed after you download it.

Student data

Completed pages carry a real student's name and scores. Store, hand over and destroy this file the same way you would any other student record.

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PREVIEW

Binder Cover, Spine Label & Divider Tabs

A binder cover, six divider tabs, and a short setup list.

Binder cover & spine label

Student _____ Case manager _____ School year _____

Goal start date _____ Next review date _____

Cut along the outer edge and use as a binder cover, a folder label, or a clipboard cover for this student's probe folder.

Divider tabs — print and cut

01 Start Here
The six-step routine, one page.

02 The Goal
The written goal and where forms A-F fit it.

03 Probe Forms
The 6 rotating forms, one per week.

04 Graph & Decision
The aim line, the weekly plot, the three-in-a-row rule.

05 Caseload Summary
Every student on this goal, one grid, once a month.

06 Family Update
The note home and the handoff sheet, ready to fill in.

Before the first probe

- Write the goal from the sample and change every bracket for this student.
- Give the baseline: three forms, three different days, before the first plotted point.
- Share the rotation (A, B, C, D, E, F) with anyone else who might give a form.

PREVIEW

My name: _____

Find the LCD: the smallest number both bottoms go into. Follow the steps.

$$\frac{3}{4} \text{ and } \frac{1}{6} = 12$$

Count by 4s: 4, 8, 12, 16 Count by 6s: 6, 12, 18

1 **Count by each bottom number.**
Write the numbers you say, one list for each bottom.

2 **Find the first number on both lists.**
The smallest number on both lists is the LCD.

3 **Check. Does each bottom go into it?**
4 goes into 12. 6 goes into 12. Done.

Try it: $\frac{2}{5}$ and $\frac{1}{4}$ = ☐

Try it: $\frac{5}{6}$ and $\frac{3}{8}$ = ☐

Try it: $\frac{7}{9}$ and $\frac{5}{12}$ = ☐

PREVIEW

Preview - Bright Path Sped

My name: _____

Count by each bottom. Circle the first match. Write it in the box.

$\frac{3}{10}$ and $\frac{1}{4}$ LCD ☐

Count by 10s _____

Count by 4s _____

$\frac{5}{12}$ and $\frac{1}{9}$ LCD ☐

Count by 12s _____

Count by 9s _____

$\frac{4}{9}$ and $\frac{5}{6}$ LCD ☐

Count by 9s _____

Count by 6s _____

$\frac{3}{7}$ and $\frac{1}{2}$ LCD ☐

Count by 7s _____

Count by 2s _____

 Color a star when you finish! 

PREVIEW

Preview - Bright Path Sped

My name: _____

Write the LCD for each pair. Keep going until time is up!

1. $\frac{4}{5}$ and $\frac{4}{7}$ LCD ☐

2. $\frac{1}{8}$ and $\frac{2}{9}$ LCD ☐

3. $\frac{1}{3}$ and $\frac{2}{7}$ LCD ☐

4. $\frac{1}{2}$ and $\frac{4}{9}$ LCD ☐

5. $\frac{1}{3}$ and $\frac{5}{9}$ LCD ☐

6. $\frac{2}{3}$ and $\frac{3}{5}$ LCD ☐

7. $\frac{1}{2}$ and $\frac{7}{10}$ LCD ☐

8. $\frac{1}{2}$ and $\frac{1}{3}$ LCD ☐

9. $\frac{5}{7}$ and $\frac{2}{9}$ LCD ☐

10. $\frac{4}{5}$ and $\frac{4}{9}$ LCD ☐

11. $\frac{7}{8}$ and $\frac{1}{12}$ LCD ☐

12. $\frac{1}{3}$ and $\frac{7}{12}$ LCD ☐

PREVIEW

Preview - Bright Path Sped

My name: _____

Write the LCD for each pair. Keep going until time is up!

1. $\frac{4}{5}$ and $\frac{7}{10}$ LCD ☐

2. $\frac{1}{2}$ and $\frac{5}{9}$ LCD ☐

3. $\frac{2}{3}$ and $\frac{1}{5}$ LCD ☐

4. $\frac{1}{2}$ and $\frac{1}{7}$ LCD ☐

5. $\frac{1}{5}$ and $\frac{6}{7}$ LCD ☐

6. $\frac{5}{8}$ and $\frac{7}{12}$ LCD ☐

7. $\frac{1}{3}$ and $\frac{1}{7}$ LCD ☐

8. $\frac{5}{9}$ and $\frac{11}{12}$ LCD ☐

9. $\frac{1}{2}$ and $\frac{11}{12}$ LCD ☐

10. $\frac{1}{5}$ and $\frac{1}{9}$ LCD ☐

11. $\frac{1}{8}$ and $\frac{5}{9}$ LCD ☐

12. $\frac{1}{3}$ and $\frac{4}{9}$ LCD ☐

PREVIEW

Answer Key and Scoring - Forms A-C

Each row reads: the pair, then its least common denominator.

Form A

#	Pair	LCD	Right?
1	2/3 and 5/7	21	
2	1/2 and 6/7	14	
3	2/3 and 5/8	24	
4	1/3 and 9/10	30	
5	2/9 and 1/12	36	
6	5/7 and 7/8	56	
7	3/5 and 3/10	10	
8	4/7 and 3/10	70	
9	1/3 and 11/12	12	
10	2/3 and 3/11	33	
11	1/2 and 1/11	22	
12	1/2 and 5/8	8	

Correct ___ / 12

Form B

#	Pair	LCD	Right?
1	4/5 and 4/7	35	
2	1/8 and 2/9	72	
3	1/3 and 2/7	21	
4	1/2 and 4/9	18	
5	1/3 and 5/9	9	
6	2/3 and 3/5	15	
7	1/2 and 7/10	10	
8	1/2 and 1/3	6	
9	5/7 and 2/9	63	
10	4/5 and 4/9	45	
11	7/8 and 1/12	24	
12	1/3 and 7/12	12	

Correct ___ / 12

Form C

#	Pair	LCD	Right?
1	2/3 and 9/10	30	
2	1/3 and 2/9	9	
3	3/10 and 1/12	60	
4	1/2 and 1/8	8	
5	1/3 and 3/5	15	
6	1/2 and 2/3	6	
7	3/5 and 2/11	55	
8	1/2 and 2/7	14	
9	2/7 and 3/10	70	
10	1/5 and 9/10	10	
11	1/2 and 8/11	22	
12	4/5 and 1/8	40	

Correct ___ / 12

Scoring reminder

- Timed: the same minutes every week, set on the goal page. Self-corrections count as correct.
- The LCD is the least number both bottoms go into. A larger common number is right only if your team's rule says so.
- A pair left blank when time is up is not an error; mark where the student stopped.
- Log the score the same day.

PREVIEW

Teacher Notes - Reading the Errors

Where the work breaks tells you what to teach next.

What this probe measures

- Whether a student can find the smallest number two denominators both go into, fast and without a list when the bottoms are friendly.
- It is a quick weekly check against a goal you write. It is not a norm-referenced test and carries no benchmark score or typical rate.

The bigger bottom, no check

- 1/4 and 1/6 written as 6: 4 does not go into 6.
- Teach it: the answer must pass both checks. Does each bottom go into it?

The bottoms were multiplied

- 1/4 and 1/6 written as 24: both bottoms go in, but 12 is smaller.
- Teach it: count by each bottom and stop at the first match.

The list stopped early

- The student counted by 8s to 24 but only by 12s to 12 and missed the match at 24.
- Teach it: count the bigger bottom first, then check each number against the other bottom.

A multiplication fact slipped

- The right method with 9 x 7 written as 56.
- That is a fact, not the strategy. Teach the fact, then run the next form.

The three kinds of pair on every form

- One bottom goes into the other (2 and 6, 4 and 12): the LCD is the bigger bottom. These are the quick ones.
- Neither bottom goes into the other, LCD up to 30 (4 and 6, 5 and 3): count by the bigger bottom and check.
- LCD from 31 to 72 (8 and 9, 5 and 12): the pairs where a list or the check step matters most.
- Every form has the same mix, so a change in score is the student, not the form.

Words to use when you teach it

- **Denominator**: the bottom number of a fraction.
- **Common denominator**: a number both bottoms go into.
- **LCD**: the least common denominator, the smallest one.

This student's scoring rules and notes

PREVIEW

Least Common Denominator - Caseload Summary

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

Teacher / case manager _____ Skill _____ Marking period _____

Student	Base	Crit	P1	P2	P3	P4	P5	P6	P7	P8	Trend	Decision

How to fill it

- One row per student on this skill. Baseline is the median of the first three probes.
- One column per weekly probe; write the score out of 12, not a percent.
- Trend: up, flat or down over the last four probes.
- Decision: keep going, change the teaching, or raise the target.
- Leave a cell blank rather than guess; a gap is more honest than a filled-in score.

What it is for

Grouping. 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.

PREVIEW

A Filled-In Data Log (Invented Student)

Priya is invented. Twelve weekly probes on the least common denominator, the aim line, the change that three low points forced, and the criterion being met.

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

By May 20, when given 12 pairs of fractions with different denominators and the same set time each week, Priya will write the least common denominator of 10 of 12 pairs on 3 consecutive weekly probes, as measured by teacher-scored least common denominator probes (forms A–F).

#	Date	Form	Correct	Errors	Graphed	Notes
1	1/12	A	5	7	5	baseline
2	1/13	B	6	6	6	baseline
3	1/14	C	5	7	5	baseline (median of 5, 6, 5 = 5)
4	1/21	D	5	7	5	took the bigger bottom without checking the other
5	1/28	E	5	7	5	same error; three under the aim line in a row: change made
6	2/4	F	7	5	7	count by both bottoms, circle the match: list stopped early on 8 and 12
7	2/11	A	8	4	8	lists complete; two times-table facts slipped
8	2/18	B	8	4	8	multiplied both bottoms twice: right, but not the least
9	2/25	C	9	3	9	checked each bottom into the answer; one 9s fact slipped
10	3/4	D	10	2	10	criterion score (10 of 12), first time
11	3/11	E	10	2	10	second in a row at 10
12	3/18	F	11	1	11	third in a row: goal met

How to read the log

- Baseline was the median of three forms on three days: 5, 6 and 5, so 5. Not the average, not the best.
- The aim line runs from 5 at probe 1 to 10 at the goal date. Probes 3, 4 and 5 (5, 5, 5) sat under it: three in a row, so the teaching changed at probe 5 and the change is written on that row.
- The notes name where the error fell. Priya's errors were the check step, not the facts: she took the bigger bottom and never tried the other. A score alone would not have said that.
- Criterion was met on probes 10, 11 and 12 (10, 10, 11): three in a row at 10 of 12 or better.

The progress report sentence this log produces

On weekly least common denominator probes (12 pairs, timed), Priya wrote 5 of 12 correct at baseline and 10, 10 and 11 of 12 on the last three probes, meeting the criterion of 10 of 12 on 3 consecutive probes. Every number in it is on the log above; nothing is from memory.

Where every number in this example came from

- Baseline is the median of the first three probes, not the average or the best.
- Errors are 12 minus the correct score; every score traces to its row.

PREVIEW