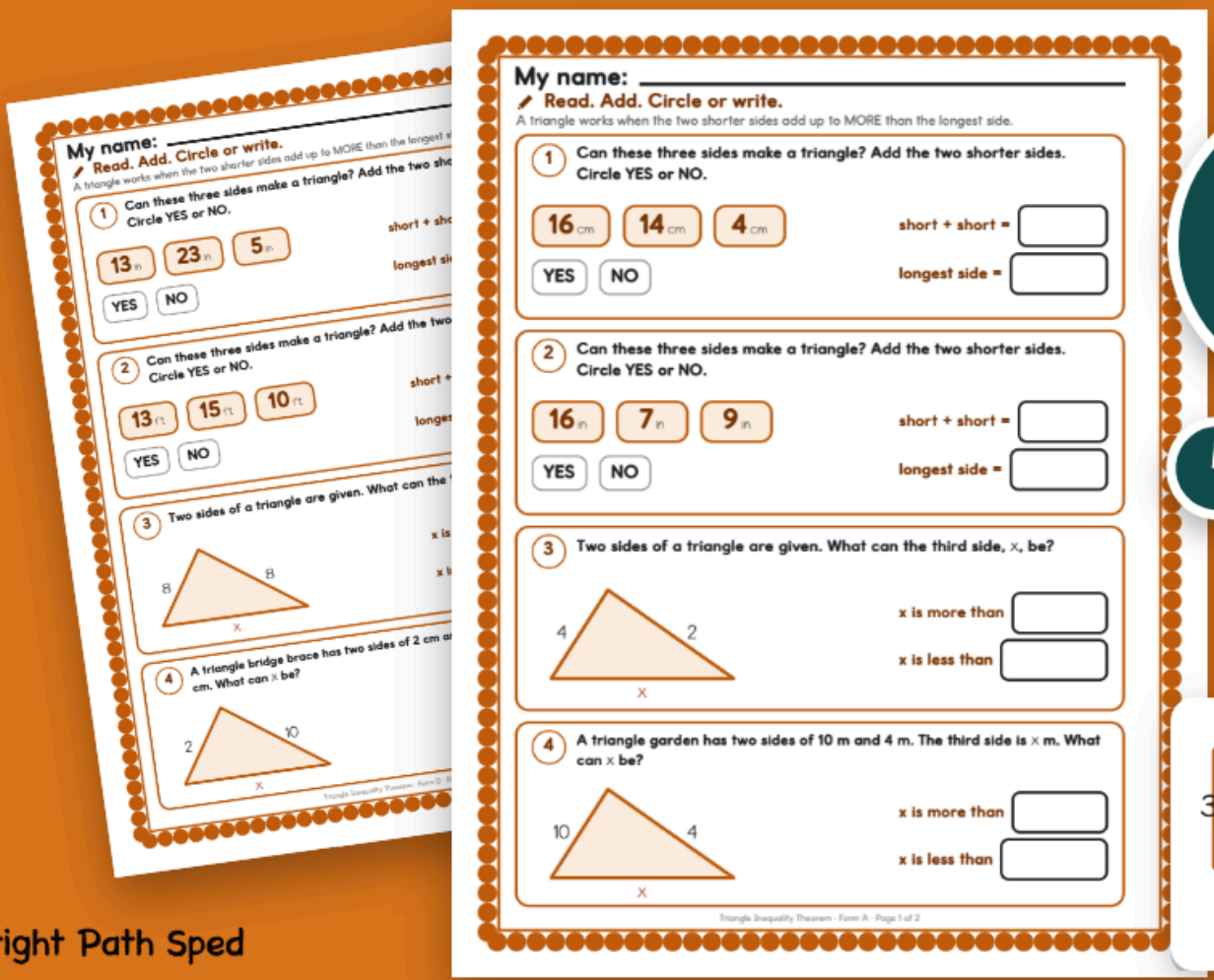
TRIANGLE

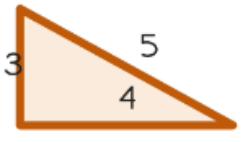
INEQUALITY THEOREM

PROGRESS MONITORING PROBES



GR. 7-9

4 FORMS



$3 + 4 > 5$

Bright Path Sped

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Please read before you print and fill in your first form.

One classroom license

- This file is for one classroom: one teacher, one caseload.
- Please do not share it, post it online, or sell it.
- Extra licenses for a team or a school are available on the product page.

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 of both pages of a form 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.

Need help?

If a field will not behave, a page will not print the way you expect, or anything here looks wrong, use Ask a Question on the product page before leaving a review. Every question is read, and a fix to the file ships as a free update — re-download it any time from My Purchases.

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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, directions, and where forms A–D fit.

03 Probe Forms
The 4 rotating forms, two pages each, one form 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) with anyone else who might give a form.

PREVIEW

Giving and Scoring the Probe

The same way every week, so a change in the score is a change in the student.

Giving the probe

- Say: "Read each problem. Add the two shorter sides. Circle YES or NO. For the third side, write what it must be more than and less than."
- Correct: on a YES-or-NO problem, the sum of the two shorter sides and the circle are both right; on a range problem, both numbers are right. Your team decides whether partial credit counts. Write that rule on the goal page before the baseline.
- Note which kind of problem each miss falls on (the key names it): can it be a triangle, or the range of the third side.
- Untimed. Let the student finish all eight.

What is on every form

- Two student pages, four problems a page, 8 problems in all.
- Four can-it-be-a-triangle problems and four range problems, in the same places on every form.
- Two of the four can-it-be-a-triangle problems are a YES and two are a NO, in a different order on each form.
- One NO on every form is the trap: the two shorter sides add to exactly the longest side. Two sides that only just meet do not make a triangle.
- Triangle inequality theorem: the two shorter sides must add up to MORE than the longest side.

Can it be a triangle?

Problems 1, 2, 5, 6 on every form. Three side lengths, not in order. The student adds the two SHORTER sides, writes the longest side, and circles YES or NO. Problem 6 is told as a short story.

Range of the third side

Problems 3, 4, 7, 8. Two sides are given. The student writes what the third side must be MORE THAN and what it must be LESS THAN. Problem 7 is a drawing with the two sides labeled; problems 4 and 8 are short stories.

Scoring each problem

- Can it be a triangle: right when the sum of the two shorter sides and the YES or NO circle are both right. The longest-side box is the student's working and is not scored on its own.
- Range of the third side: right when both numbers are right. 'More than 5, less than 13' is the answer, not 'from 5 to 13'.
- Score out of 8 and write it on the log the same day.

If the student needs the problems read aloud, or other help

Follow the supports in the student's IEP, give them the same way each week, and write them on the goal page so the next person gives the probe the same way.

PREVIEW

Preview · Bright Path Sped

My name: _____

Read. Add. Circle or write.

A triangle works when the two shorter sides add up to MORE than the longest side.

1 **Can these three sides make a triangle? Add the two shorter sides. Circle YES or NO.**

16 cm | 14 cm | 4 cm

YES NO

short + short = ☐

longest side = ☐

2 **Can these three sides make a triangle? Add the two shorter sides. Circle YES or NO.**

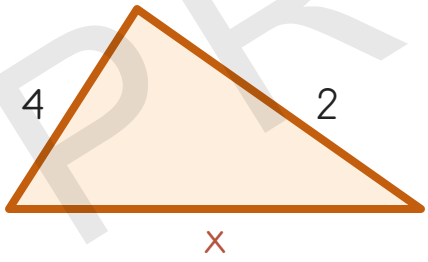
16 in | 7 in | 9 in

YES NO

short + short = ☐

longest side = ☐

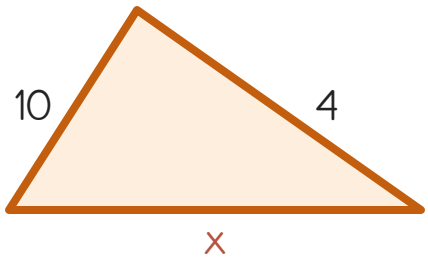
3 **Two sides of a triangle are given. What can the third side, x, be?**



x is more than ☐

x is less than ☐

4 **A triangle garden has two sides of 10 m and 4 m. The third side is x m. What can x be?**



x is more than ☐

x is less than ☐

PREVIEW

Preview · Bright Path Sped

My name: _____

Read. Add. Circle or write.

A triangle works when the two shorter sides add up to MORE than the longest side.

5 **Can these three sides make a triangle? Add the two shorter sides. Circle YES or NO.**

13 m | 24 m | 10 m

YES | NO

short + short = ☐

longest side = ☐

6 **A tent has poles of 10 cm, 5 cm and 8 cm. Can the poles make a triangle? Add the two shorter sides.**

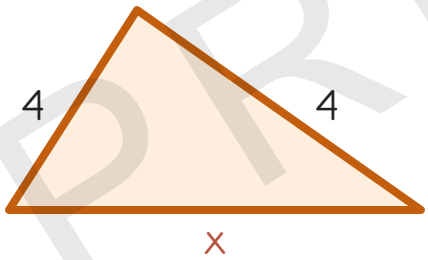
10 cm | 5 cm | 8 cm

YES | NO

short + short = ☐

longest side = ☐

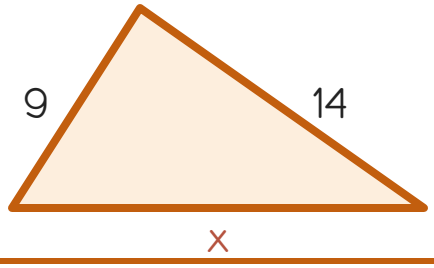
7 **Two sides of a triangle are given. What can the third side, x, be?**



x is more than ☐

x is less than ☐

8 **A triangle flag has two sides of 9 ft and 14 ft. The third side is x ft. What can x be?**



x is more than ☐

x is less than ☐

☆ Color a star when you finish! ☆

PREVIEW

Preview · Bright Path Sped

My name: _____

Read. Add. Circle or write.

A triangle works when the two shorter sides add up to MORE than the longest side.

5 **Can these three sides make a triangle? Add the two shorter sides. Circle YES or NO.**

19 ft | 9 ft | 10 ft

YES | NO

short + short = ☐

longest side = ☐

6 **Three sticks are 6 m, 11 m and 6 m long. Can they make a triangle? Add the two shorter sides.**

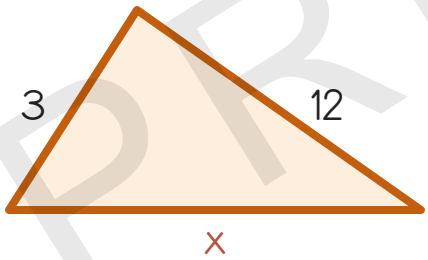
6 m | 11 m | 6 m

YES | NO

short + short = ☐

longest side = ☐

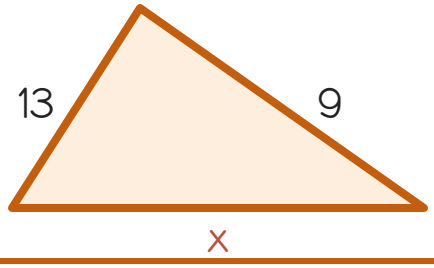
7 **Two sides of a triangle are given. What can the third side, x, be?**



x is more than ☐

x is less than ☐

8 **A triangle tent door has two sides of 13 in and 9 in. The third side is x in. What can x be?**



x is more than ☐

x is less than ☐

☆ Color a star when you finish! ☆

PREVIEW

Preview · Bright Path Sped

My name: _____

Read. Add. Circle or write.

A triangle works when the two shorter sides add up to MORE than the longest side.

5 **Can these three sides make a triangle? Add the two shorter sides. Circle YES or NO.**

14 in | 12 in | 14 in

YES | NO

short + short = ☐

longest side = ☐

6 **A sign uses strips of 10 ft, 20 ft and 10 ft. Can the strips make a triangle? Add the two shorter sides.**

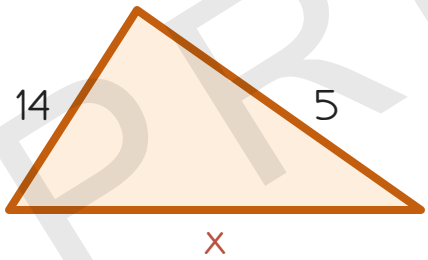
10 ft | 20 ft | 10 ft

YES | NO

short + short = ☐

longest side = ☐

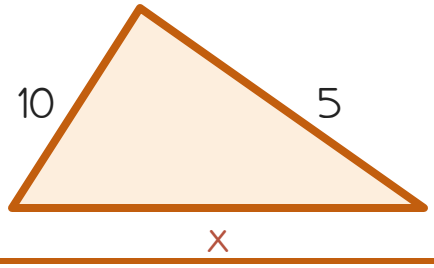
7 **Two sides of a triangle are given. What can the third side, x, be?**



x is more than ☐

x is less than ☐

8 **A triangle bridge brace has two sides of 10 cm and 5 cm. The third side is x cm. What can x be?**



x is more than ☐

x is less than ☐

☆ Color a star when you finish! ☆

PREVIEW

Teacher Notes - Reading the Misses

Which kind of problem is missed, and what is written in the sum box, tells you what to teach next.

What this probe measures

- Whether a student can use the triangle inequality theorem: tell whether three side lengths can make a triangle, and find the range of the third side when two sides are given.
- It is a quick weekly check against a goal you write. It is not a norm-referenced test and carries no benchmark score.

Adding the wrong two sides

- For 5, 6 and 9, the check is 5 + 6 = 11, compared to 9. A student who adds the longest side to another side will always get a bigger number.
- Teach: circle the longest side first, then add the other two.

Equal is not enough

- For 3, 4 and 7, the two shorter sides add to exactly 7. The sides lie flat on one line. That is NO. Every form has one problem like this.
- Teach: the sum has to be MORE than the longest side, not the same.

Range of the third side: two ends

- With sides 4 and 9, the third side is more than 9 minus 4 = 5 and less than 4 + 9 = 13. A student who writes only the sum has one end.
- A student who writes 'from 5 to 13' may be including the ends. Neither end works: more than and less than.
- Two equal sides, such as 6 and 6: the third side is more than 0 and less than 12. Forms B and D have one problem like this.

Misses that cluster on one kind of problem

- Can it be a triangle: problems 1, 2, 5, 6. Range of the third side: problems 3, 4, 7, 8. These positions are the same on all four forms.
- Several misses on one kind across two forms: teach that kind with a worked example before more probes.
- Problems 4, 6 and 8 are short stories: a miss only on the stories can be a reading problem, not a triangle problem.

The student cannot start

- Do the first problem together, aloud, and let the student do the second. Fade the help and write what you changed on the log.

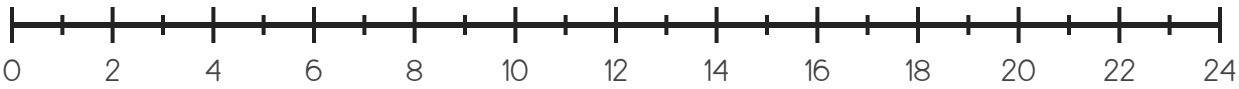
PREVIEW

My name: _____

Write the two numbers. Mark the number line.

1. Two sides are 3 and 8. What can the third side be?

more than ☐ less than ☐



Draw an open circle at each end. Shade between the circles.

2. Two sides are 5 and 5. What can the third side be?

more than ☐ less than ☐



Draw an open circle at each end. Shade between the circles.

3. Two sides are 6 and 13. What can the third side be?

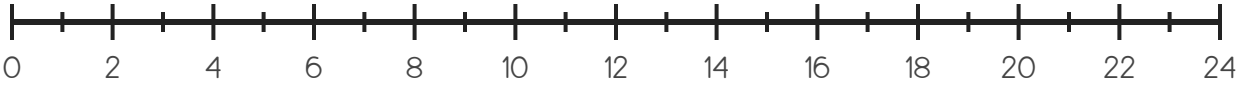
more than ☐ less than ☐



Draw an open circle at each end. Shade between the circles.

4. Two sides are 9 and 12. What can the third side be?

more than ☐ less than ☐



Draw an open circle at each end. Shade between the circles.

PREVIEW

Triangle Inequality Theorem - Caseload Summary

Every student on this goal, on one grid. Eleven 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 8, 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

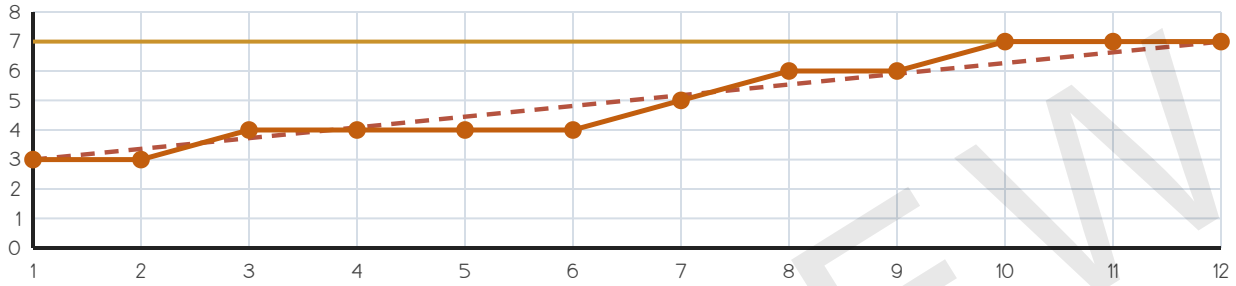
A Filled-In Data Log (Invented Student)

Jordan is invented. Twelve weekly probes, the aim line, the change three low points forced, and the criterion being met.

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

By November 20, when given 8 triangle inequality problems (can three side lengths make a triangle, and the range of the third side), Jordan will answer 7 of 8 problems correctly on 3 consecutive weekly probes, as measured by teacher-scored triangle inequality theorem probes (forms A–D).

Jordan's graph (invented): dots are the weekly scores, dashed is the aim line, gold is the criterion of 7



#	Date	Form	Correct	Errors	Graphed	Notes
1	9/8	A	3	5	3	baseline
2	9/9	B	3	5	3	baseline
3	9/10	C	4	4	4	baseline (median of 3, 3, 4 = 3)
4	9/17	D	4	4	4	adds all three sides
5	9/24	A	4	4	4	same: compares the two longest sides
6	10/1	B	4	4	4	3 under the aim line: add the two SHORTER sides
7	10/8	C	5	3	5	adds the two shorter sides
8	10/15	D	6	2	6	range: writes the sum only
9	10/22	A	6	2	6	range: sum and difference, both ends
10	10/29	B	7	1	7	criterion score, first time
11	11/5	C	7	1	7	second in a row at 7
12	11/12	D	7	1	7	third in a row: goal met

How to read the log

- Baseline was the median of three forms on three days: 3, 3, 4, so 3. Not the average, not the best.
- The aim line runs from 3 at probe 1 to 7 at probe 12. Probes 4, 5 and 6 (4, 4, 4) sat under it: three in a row, so the teaching changed and the change is written on the row.
- The notes name what the misses looked like: Jordan added all three sides, then compared the two longest. A score alone would not have said that.
- Criterion was met on probes 10, 11 and 12 (7, 7, 7): three in a row at 7 of 8 or better.

The progress report sentence this log produces

On weekly triangle inequality theorem probes (8 problems, untimed), Jordan scored 3 of 8 at baseline and 7, 7 and 7 of 8 on the last three probes, meeting the criterion of 7 of 8 on 3 consecutive probes.

PREVIEW