

ANSWER MAZE



MEASURING SEGMENTS AND SEGMENT ADDITION

Measuring Segments & Segment Addition

One page · 10–15 minutes · nothing to prepare

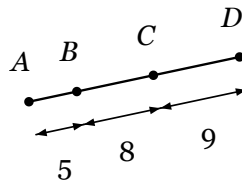
FREE

1

A, B, C and D are on one line, in that order. **Find AC.**

13 → you are out
22 → go to 3

*Which pieces make up the length asked for?
Use only those pieces, not the whole line.*

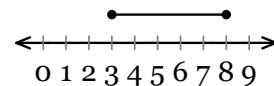


2

How long is the segment drawn above the ruler?

8 → go to 6
5 → go to 4

Imagine sliding the ruler so it starts at 0. Where would the right end be then?

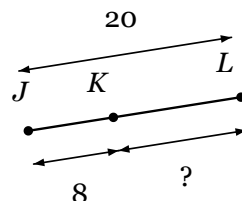


3

K is between J and L. **Find KL.**

28 → go to 2
12 → go to 4

The whole is the largest of the three numbers, so a piece is always smaller.

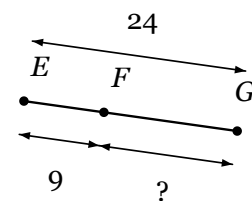


4

F is between E and G. **Find FG.**

15 → go to 8
33 → go to 3

Write the equation in letters first. Then put the numbers in.



1. **Hand out page 3.** That is the whole preparation.
2. **Say this once:** *“Circle what the question asks for. Write the equation in letters before you put in a number. Then check your answer. Does it add back up?”*
3. **Start at box 2.** Six boxes lead from the start to the end. **Write every box number in the row at the foot as you go.**

Student sheet	page 3, one per student. It has three small pictures: points in the order A, B, C, points in the order A, C, B, and a ruler that does not start at 0.
Answers	page 4.

The route is 2 → 4 → 8 → 7 → 5 → 1 → out. Boxes 3 and 6 are not on it. **They look like every other box:** a task, two numbers, two box numbers and a hint. One of them has a drawing and one does not. Both of their answers lead back onto the route.

Each box off the route catches one kind of mistake. Four boxes send a wrong answer to box 3. A student there used the wrong operation. They added a piece to the whole, put the wrong point in the middle of a three-letter name, added all three pieces, or dropped a minus sign. Two boxes send a wrong answer to box 6. A student there gave a number that is not the length asked for. They read only the right end of a ruler that does not start at 0, or they gave x when a length was asked for. Many students keep making this last mistake in later units.

What the row at the foot tells you in one glance. A clean run is **six numbers**. A longer row shows where the student went wrong. The number just before 3 or 6 is the box they got wrong. Which of the two boxes it is tells you which mistake they made.



This is the free lesson this activity came from. The worksheet, the full answers and the lesson plan are on it, at three levels of difficulty.
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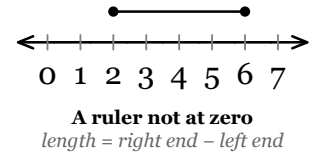
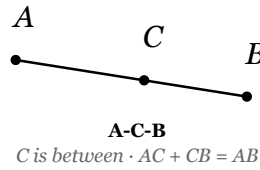
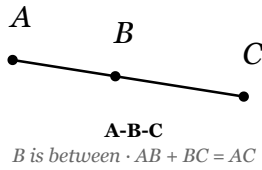
Answer Maze

Start at box 2 · circle what is asked for

Name _____

Period _____

Date _____

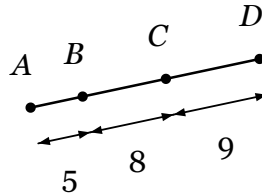


1

A, B, C and D are on one line, in that order.
Find AC.

13 → you are out
22 → go to 3

Which pieces make up the length asked for? Use only those pieces, not the whole line.

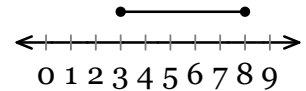


2

How long is the segment drawn above the ruler?

8 → go to 6
5 → go to 4

Imagine sliding the ruler so it starts at 0. Where would the right end be then?

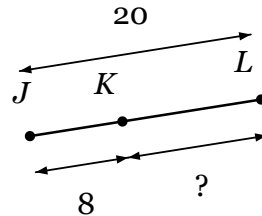


3

K is between J and L.
Find KL.

28 → go to 2
12 → go to 4

The whole is the largest of the three numbers, so a piece is always smaller.

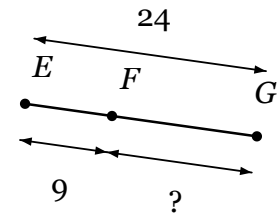


4

F is between E and G.
Find FG.

15 → go to 8
33 → go to 3

Write the equation in letters first. Then put the numbers in.



5

R, T and S are on one line, in that order. $RT = 13$ and $TS = 6$. **Find RS.**

7 → go to 3
19 → go to 1

In a three-letter name the middle letter is the point in the middle.

6

X, Y and Z are on one line, in that order. $XY = x + 7$, $YZ = 2x$ and $XZ = 25$. **Find YZ.**

12 → go to 2
6 → go to 4

Put your answer back into both pieces. Do they add up to the whole?

7

Two points sit on a number line at -5 and 7.
How far apart are they?

2 → go to 3
12 → go to 5

Subtract the other way around too. The distance is the same either way.

8

P, Q and R are on one line, in that order. $PQ = 3x - 2$, $QR = x + 6$ and $PR = 28$. **Find PQ.**

16 → go to 7
6 → go to 6

Circle what the question asks for before you start.

Write every box number here as you go. It helps you find your way back if you get lost. **A clean run is six numbers.**

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The route, in order. Boxes 3 and 6 are not on it. They come last in the table. A student reaches them only by a wrong answer.

2 → 4 → 8 → 7 → 5 → 1 → out

	Box	The task	Answer	Wrong answer goes to	Right goes to
1	Box 2	How long is the segment drawn above the ruler?	5	8 (read only the right end of the ruler) → 6	box 4
2	Box 4	F is between E and G . Find FG .	15	33 (added the piece to the whole) → 3	box 8
3	Box 8	P , Q and R are on one line, in that order. $PQ = 3x - 2$, $QR = x + 6$ and $PR = 28$. Find PQ .	16	6 (gave x , not the length) → 6	box 7
4	Box 7	Two points sit on a number line at -5 and 7 . How far apart are they?	12	2 (dropped the minus sign) → 3	box 5
5	Box 5	R , T and S are on one line, in that order. $RT = 13$ and $TS = 6$. Find RS .	19	7 (put S in the middle, not T) → 3	box 1
6	Box 1	A , B , C and D are on one line, in that order. Find AC .	13	22 (added all three pieces) → 3	out
	Box 3	K is between J and L . Find KL .	12	28 (added the piece to the whole) → 2	box 4
	Box 6	X , Y and Z are on one line, in that order. $XY = x + 7$, $YZ = 2x$ and $XZ = 25$. Find YZ .	12	6 (gave x , not the length) → 4	box 2

Every wrong number comes from a common mistake, not from a slip in arithmetic. Checks worth saying aloud: Subtracting the other way round gives the same distance. A length is never negative. The whole is the largest of the three numbers. Put x back into both pieces and add them.

Guessing does not get a student out. Every simple guessing rule, such as always taking the larger number, goes wrong within the first four boxes.