

Number Keepers

SD-B037 / AGES 7+ / YOUNGER WITH AN ADULT

Give three numbers a place to stay. Read two values, write their sum, and notice what changes when one value is replaced.

YOU NEED: A pencil and three paper spaces labelled First, Second and Total. Counters or tally marks are optional.

- MEET

Make three homes for numbers: First, Second and Total. Start all three at 0.
- WATCH

Write 3 in First and 2 in Second. Read them and write their sum, 5, in Total. Keep 3 and 2.
- TRY

Replace Second with 4. Predict every box. Has an instruction told Total to change?
- CELEBRATE

Now add First and Second again. Explain why Total changes this time.

FIRST

SECOND

TOTAL

After this instruction	First	Second	Total
Start	0	0	0
Set First to 3			
Set Second to 2			
Write the sum in Total			
Set Second to 4			
Write the sum again			

TELL THE STORY: Which place did this instruction change? Which places stayed the same?

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A little help beside the learner. Read this page first; keep the answers here.

LEARNING GOAL

Track separate stored values and explain that reading a value does not remove it or automatically update another value.

BEFORE YOU BEGIN

Follow an ordered plan and add small numbers using marks, fingers, or adult help.

WHY IT MATTERS

Programs need places to keep values while they work. Instructions read particular values and write a result to a particular place.

LOOK FOR THIS REASONING

The main sequence ends at First = 3, Second = 4, Total = 7. Immediately after replacing Second, Total is still 5. In the fresh example, changing First does not automatically change Total from 7; a later addition writes 6.

IF THEY GET STUCK

“Adding uses up the numbers” or “Total updates by itself.” Keep the first two values visible and ask which instruction writes Total.

MAKE IT GENTLER

Use values up to 3, draw dots and let the adult record the rows. Keep the three spaces visible throughout.

ADD A LITTLE STRETCH

Move the addition before the instruction that sets Second. Trace from zero. Explain why setting Second later does not repair the earlier Total.

A USEFUL STOPPING POINT

On the fresh example, explain First = 1, Second = 5 and Total = 7 before the new addition; Total becomes 6 only after calculating again.

TAKE THE IDEA INTO THE COMPUTER LAB

Your paper spaces held separate values. In the lab, watch small processor storage places called registers. Reading one does not empty it.

Open the lab: thesagedad.com/computer-lab/#lesson/where-did-the-number-go