

# The CSMP Library

MATH STORY-WORKBOOKS

83-85973

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## Rollerskating 37

by Frederique



# The CSMP Library

## *Math Story-Workbooks*

### **Current List**

#### **Ages 8-11**

Summer School — 0's Discovery

Rollerskating 37

To Picture

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#### **Ages 9-14**

Summer Camp

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1,000's Dream

A Strange Country

Not Too Close

Clinton Street

Seven Secret Numbers

Shunda's Newsstand

*A series of story-workbooks providing fanciful excursions in the colorful world of mathematics for all young people, their teachers and their parents, actively involving them in the acquisition of new mathematical insights.*

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In this story-workbook, the number 37 has a very active day followed by a restless night. During the day, 37 rollerskates with the other whole numbers. From an adult point of view, their games provide a setting in which:

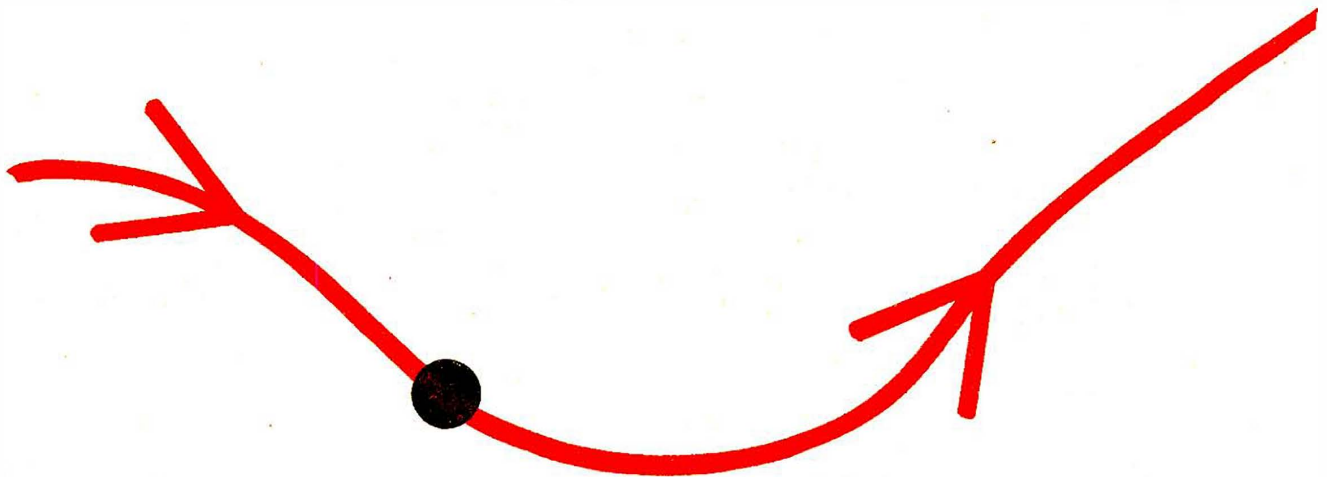
- to introduce congruence classes of whole numbers (modular arithmetic);
- to give practice in the use of some elementary numerical functions;
- to observe number patterns;
- to solve open sentences.

That night 37's sleep is disturbed by a sequence of dreams, all of which involve 37's position on the Minicomputer. Among other interesting problems provoked by these dreams, 37 is faced with some combinatorial questions involving how to sleep on the Minicomputer using only a specified number of checkers.

On each page the readers are actively involved in the development of the story as they answer questions, draw arrows, label dots, and draw or cross out checkers. The story line, the use of nonverbal languages, and the reader's participation combine to insure a rich mathematical experience.

I met 37 rollerskating in the street. We shouted "hello" to each other.

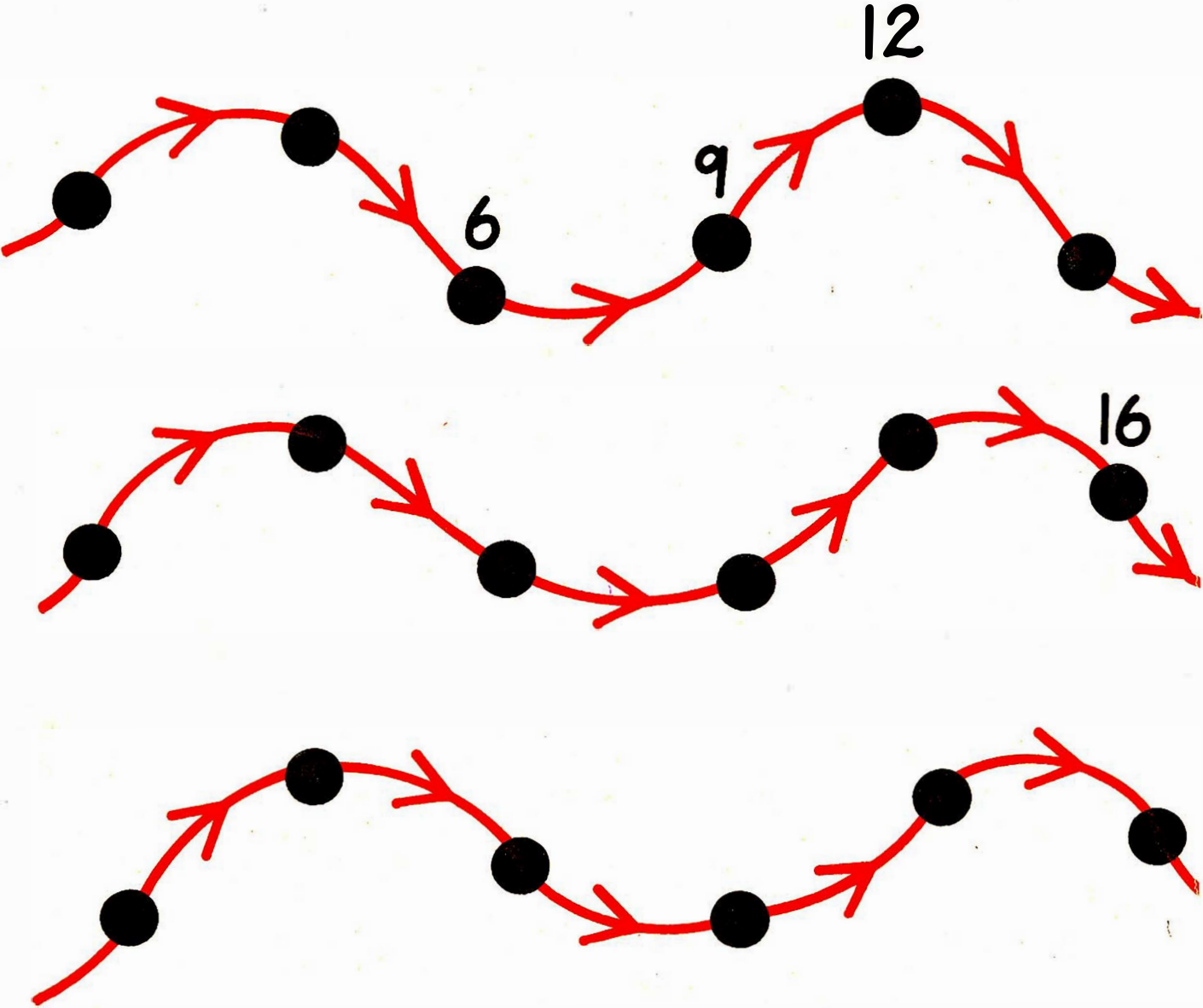
me



Very soon, 37 disappeared around the corner.

Some minutes later, 37 came by again. This time 37 was rollerskating with some friends. They were skating in three rows.

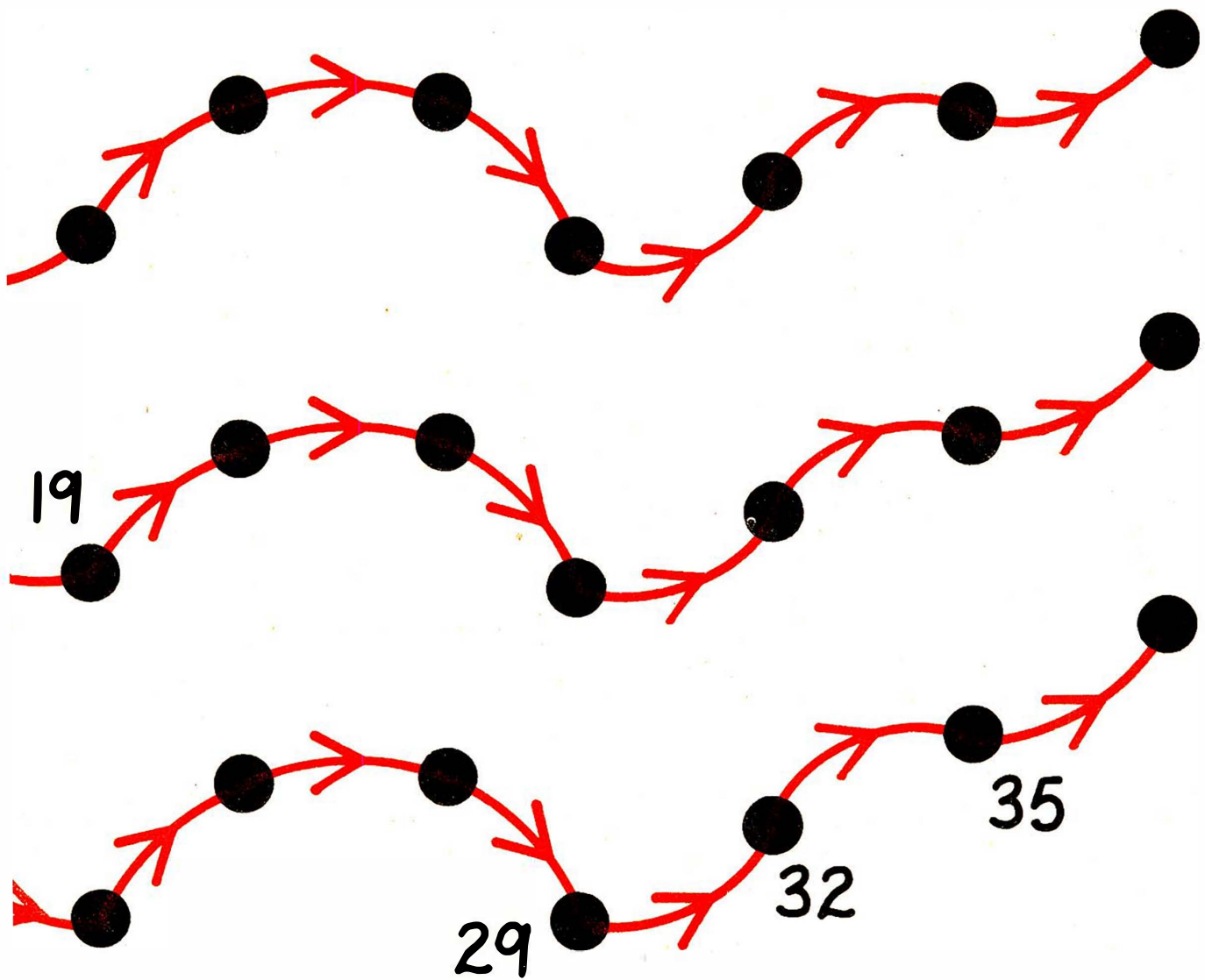
+ 3



Do you see 37 in these arrow roads?

Point to the dot for 37 and then write "37" near it.

Write the names of 37's friends near their dots.

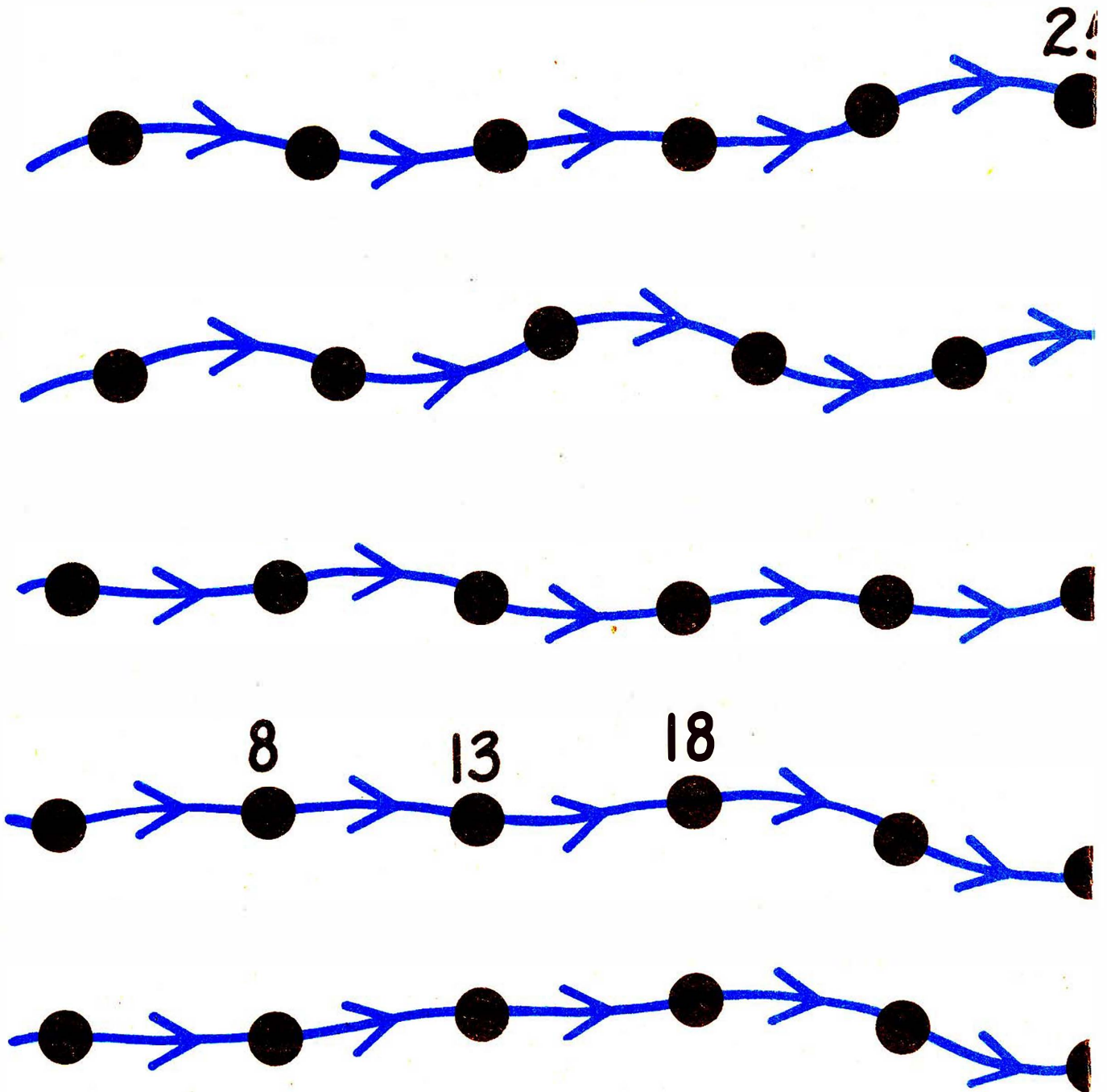


Now the numbers are skating in five rows.

In which arrow road is 37 rollerskating?

Write the names of 37 and the other numbers near their dots.

Do you see a pattern?





+5

30

35

46

51

41

57

52

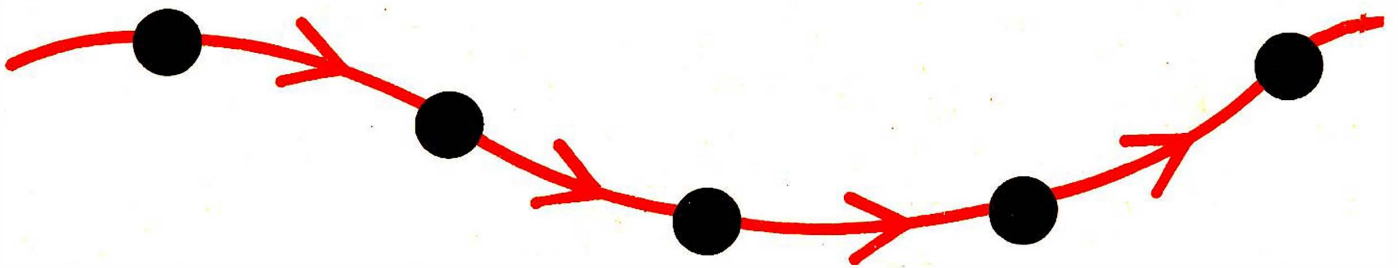
39

44

49

The number friends are in a new rollerskating show that they call "+4".

+4



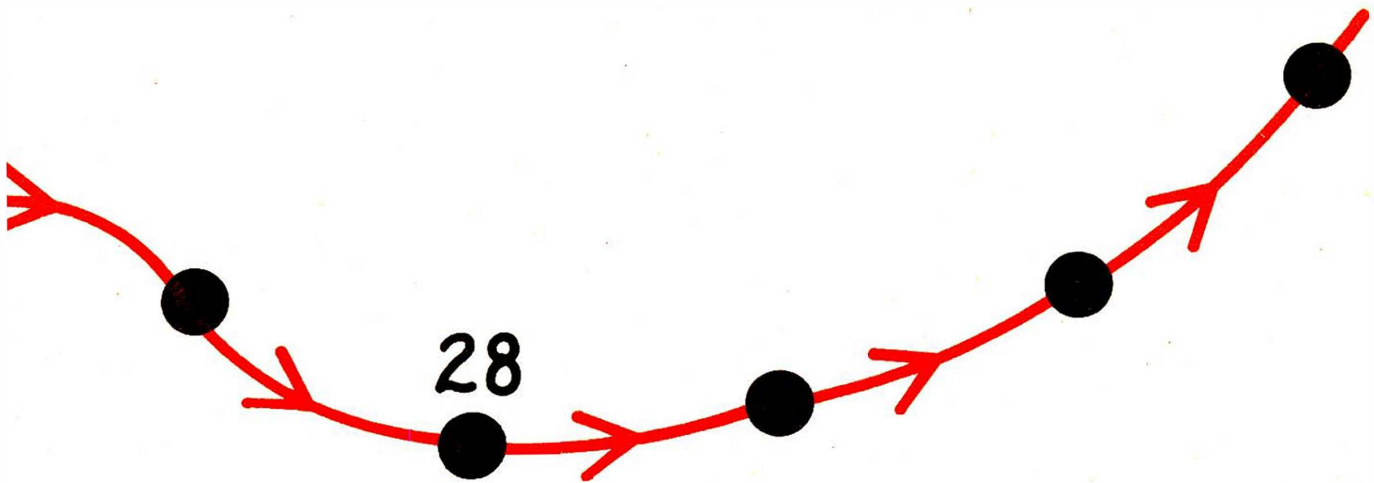


They are skating in four rows but only one arrow road is drawn for you.  
Is 37 in the same arrow road as 28?

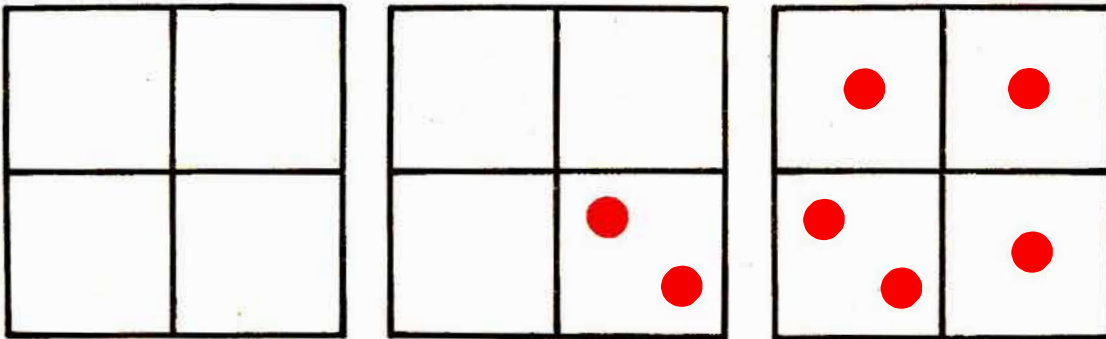
Draw the three missing arrow roads. 37 should be in one of them.

Make a big dot for 37.

Write the names of the numbers near their dots.

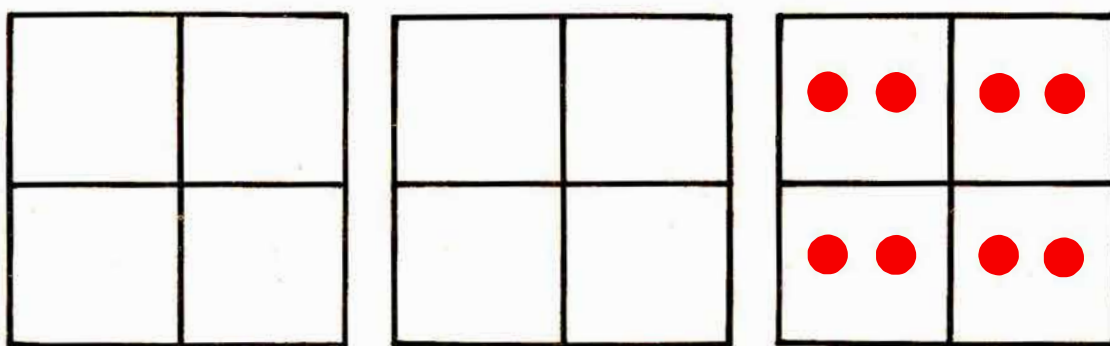


37 was very tired at the end of this busy day and fell asleep on the Minicomputer. Do you recognize 37?



Write a number story to show how you see 37 on the Minicomputer.

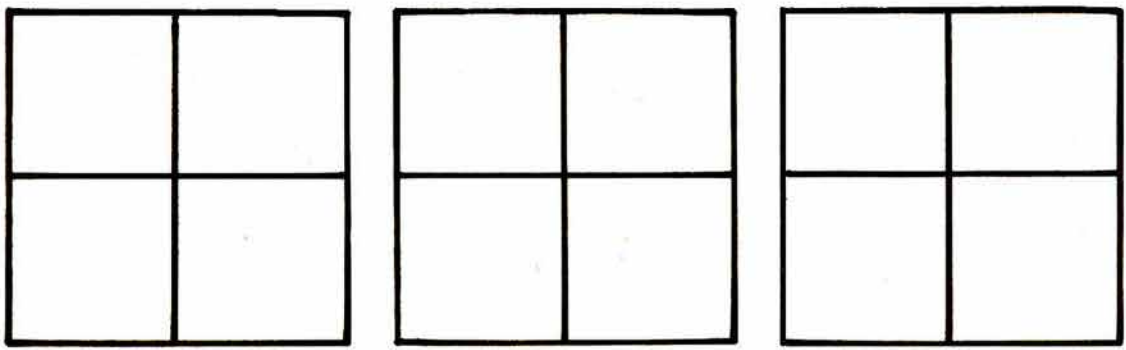
During the night, 37 had a dream and fell off the Minicomputer. 37 was half asleep and had trouble getting back on the Minicomputer. Some checkers are missing. Can you draw them?



Many solutions are possible.

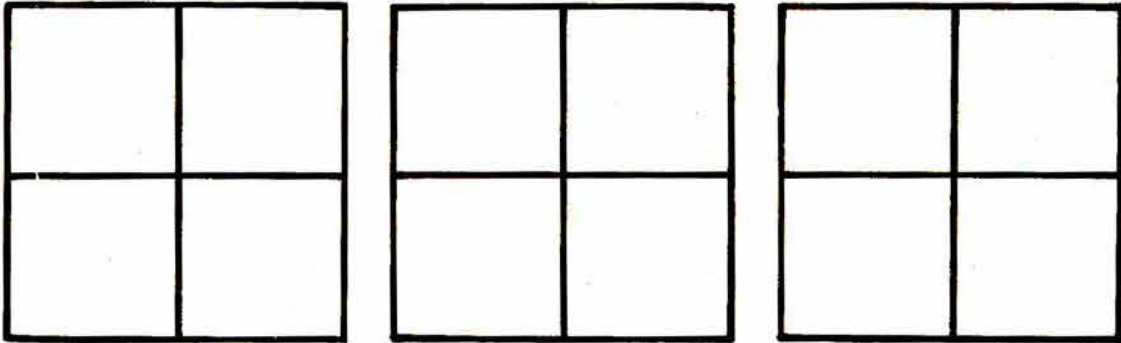
Later, 37 dreamed about sleeping on the Minicomputer with ten checkers.  
Do you think this is possible?

Can you show 37 with ten checkers?

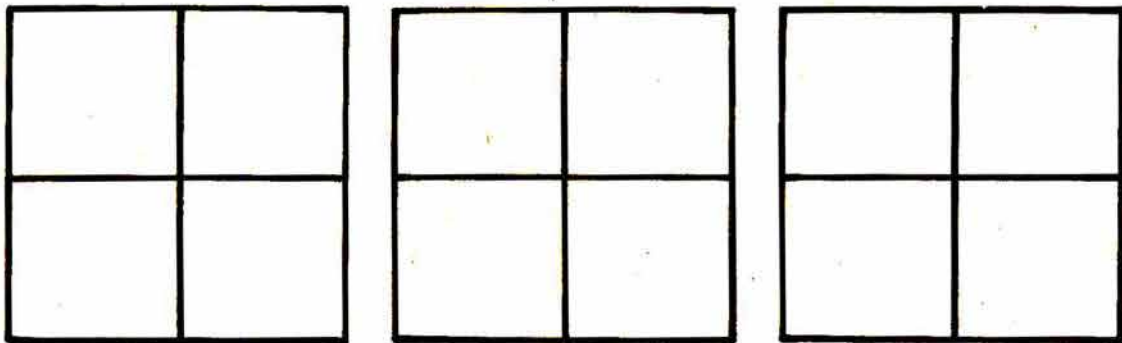




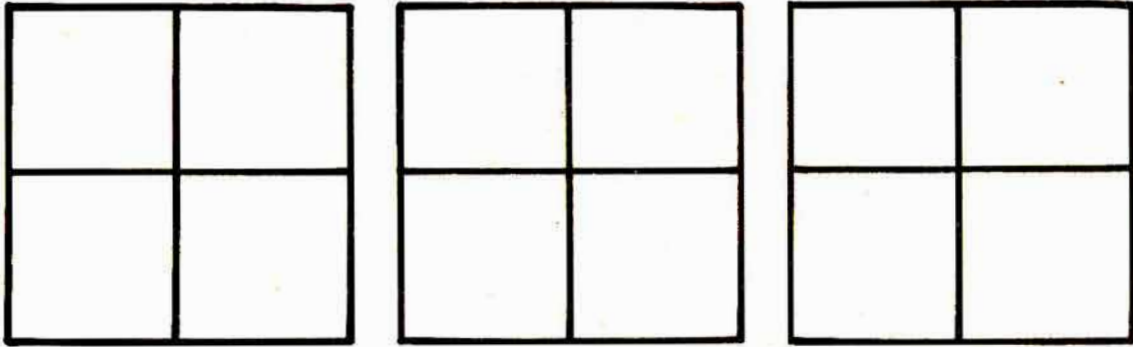
Can you show 37 with ten checkers in another way?



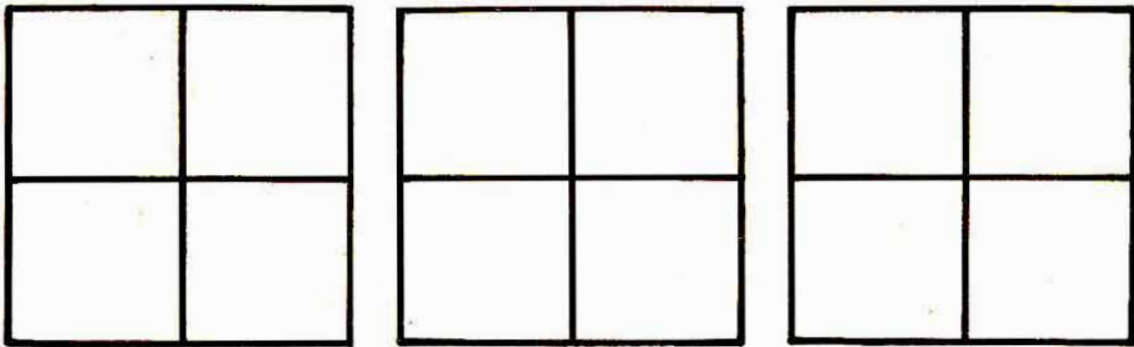
. . . in still another way?



Put 37 on this Minicomputer using as many checkers as possible.

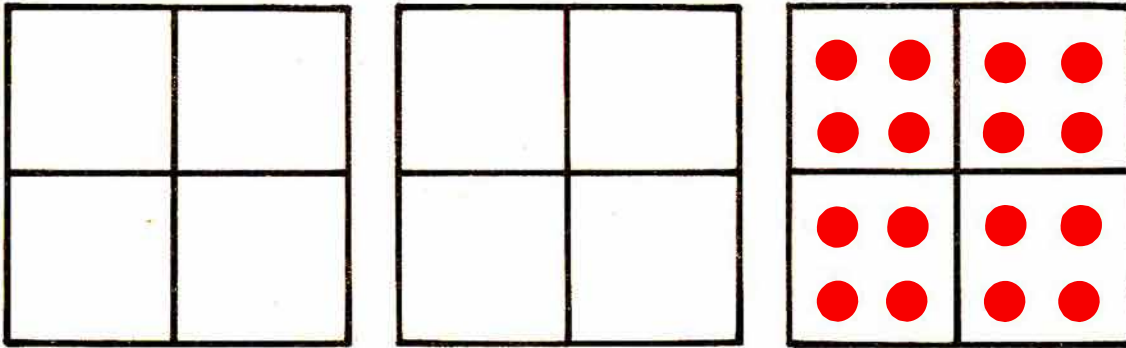


Put 37 on this Minicomputer using as few checkers as possible.



Be careful! You can show 37 with less than five checkers.

The number 37 had a nightmare. 37 dreamed of being on the Minicomputer in this way.



"This is not me!" cried 37. "There are too many checkers. Help me take some of them away."

Cross off the extra checkers and show 37 sleeping peacefully again.

Write a number story to show that you have left 37 on the Minicomputer.

This is the end of the story of the number 37, who is proud to sign this book in many different ways.

$$40 - 3$$

$$(2 \times 10) + 17$$

$$(5 \times 7) + 2$$

$$50 - 13$$

$$26 + 11$$

$$2 + 5 + 6 + 7 + 8 + 9$$

Invent some other signatures for 37 and write them below.