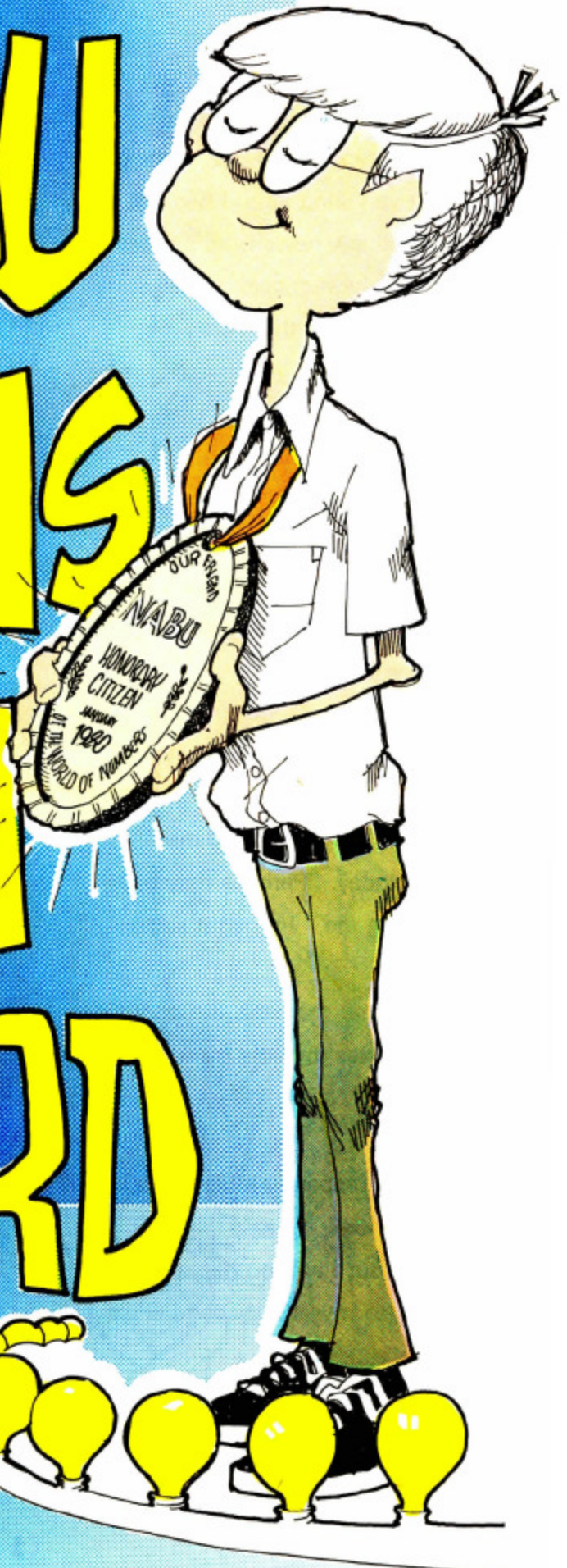


NABU WINS AN AWARD



by Frederique



Pictures / Design
Robert Hunter
Rebecca Baker

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14-6377

I was feeling lonely one evening. For a very long time, I had not received any news from my best friends, the numbers. Usually, as least one of them calls me every day.

They always have some nice stories to tell me. So many people live in the strange World of Numbers, that almost every day some new, interesting event takes place.

At the end of this month, I shall be 10 years old. I always like to have my friends around me for my birthday. "Perhaps they have forgotten me," I thought sadly.

Just at that moment, the doorbell rang. It was my little friend, the number $\frac{1}{2}$.

"We are preparing a big show in your honor," $\frac{1}{2}$ said. "It is a secret. But I am too happy to keep it to myself. I have to share it with you."

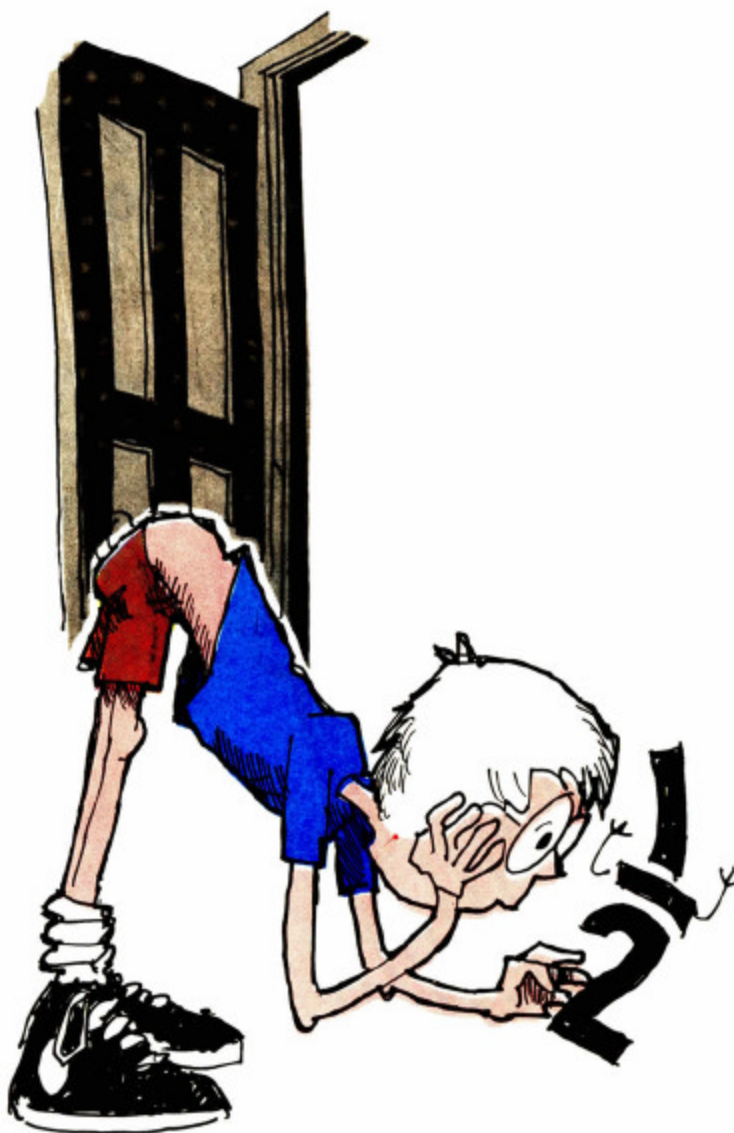


1/2 was excited and stuttered slightly. "The World Council of Numbers has elected a Committee to organize the show. I am a member of the Committee," 1/2 told me proudly.

I was so happy that my heart was thumping. "Our show will be fantastic," went on my little friend. "But we are having a difficult time with the numbers 0 and 1, who are both members of the committee."

"Each of them wants to play the most important role. Fortunately, 1,000,001, who is very old and wise, was elected President.

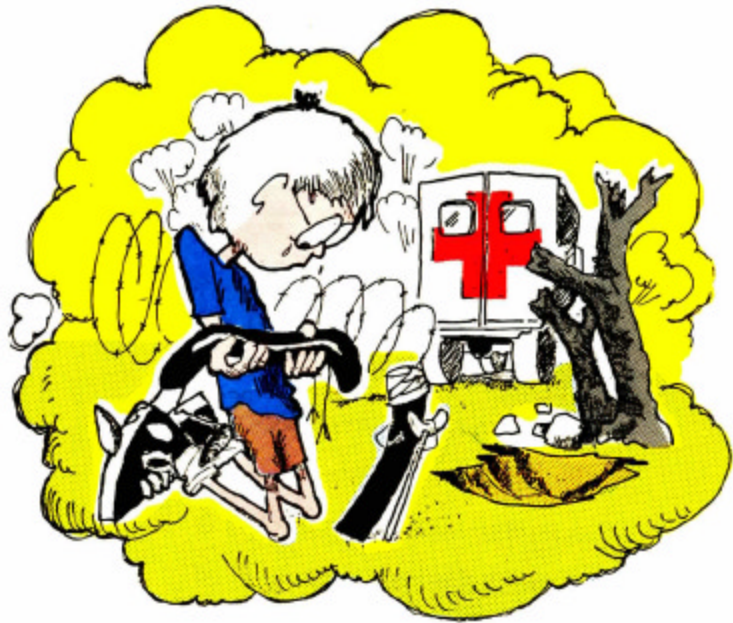
1/2 looked at the clock. "We have a meeting in 15 minutes. I must hurry. Bye, bye. You will receive an official invitation very soon."



I was so excited that I didn't sleep very well. I dreamt all night about an army of numbers fighting around my bed.

My friends 0 and 1 were badly injured and were carried out to an ambulance driven by the number 1/2.

In the morning, the mailman brought me the letter that I was waiting for so impatiently.



THE WORLD COUNCIL OF NUMBERS

January 20, 1980

Dear Nabu:

In its meeting of January 5, the WCN has unanimously elected you an Honorary Citizen of the World of Numbers. A prize medal coined in your name will be given to you on Monday, January 28, at 8:00 p.m. in the ballroom of the Numbers' Theater.

I congratulate you very much on receiving this worthwhile award, and I am looking forward to the pleasure of meeting you very soon.

Sincerely,

1,000,001

One Million One
WCN President

January 28 finally arrived.

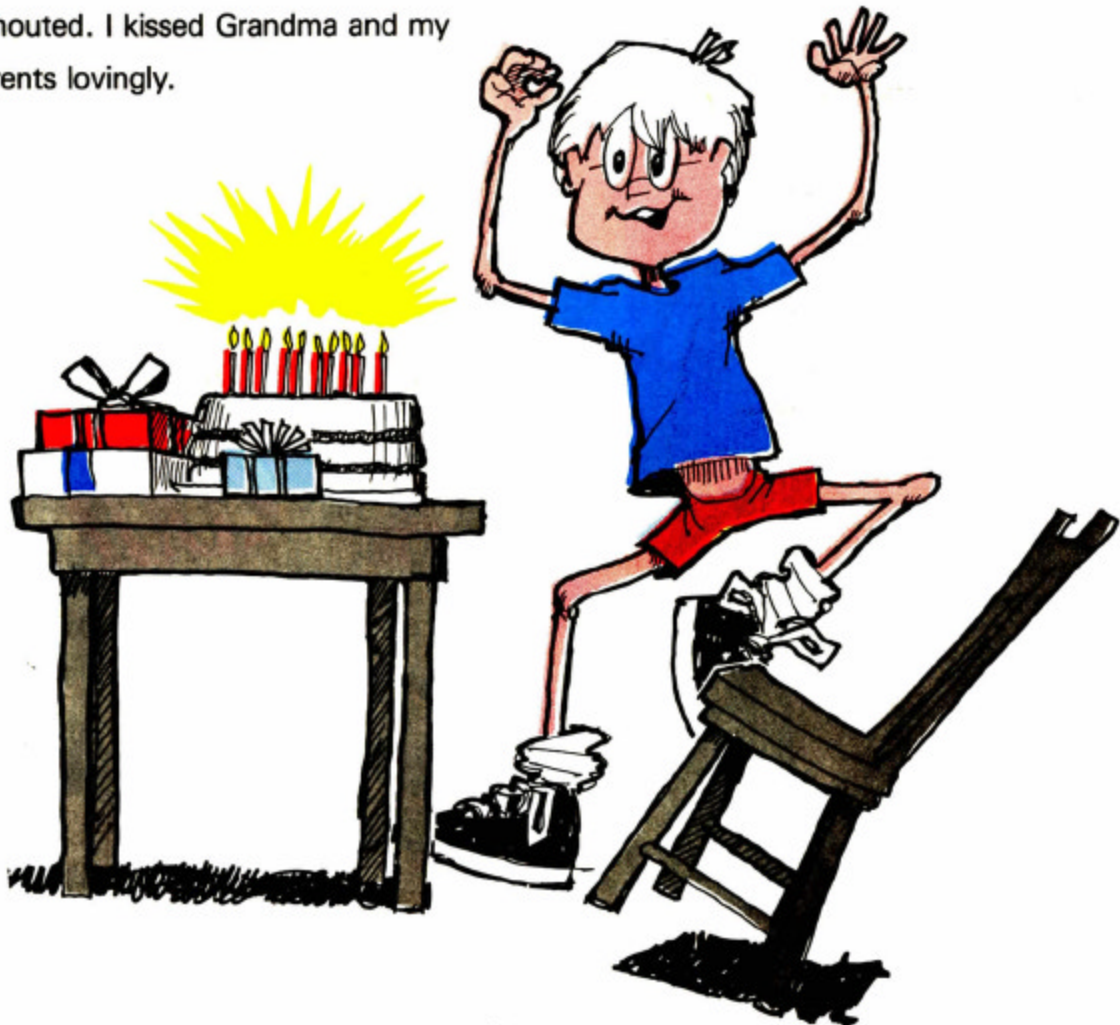
"Happy birthday to you," sang Mom, Dad, and Grandma when I awoke after a restless night. A marvelous cake decorated with 10 candles was in the middle of the breakfast table, and many presents were on my plate.

I opened them excitedly: two books, one puzzle with 1,000 pieces, and a wonderful electronic minicalculator.

"Thank you, thank you, thank you," I shouted. I kissed Grandma and my parents lovingly.

At 7:30 that evening I was ready to go. The number 1,001 picked me up and drove me to the theater.

The whole neighborhood was crowded with numbers running to the show.



The President was waiting for me in the lobby, and we went into the ballroom. The number 9.999 showed us to our seats, two big and very comfortable armchairs in the middle of the main floor.

The room was crowded. There were numbers everywhere: on the main floor, in the balcony, and even on the marvelous chandeliers that lit the room.

I recognized many friends, for instance 7 and 8, and some of their neighbors: 7.3, 7.5, 7.78, and 7.837.

I also saw some strange numbers with little caps on their heads, whom I had never met before: -7 , -3.7 , and $-1/2$.

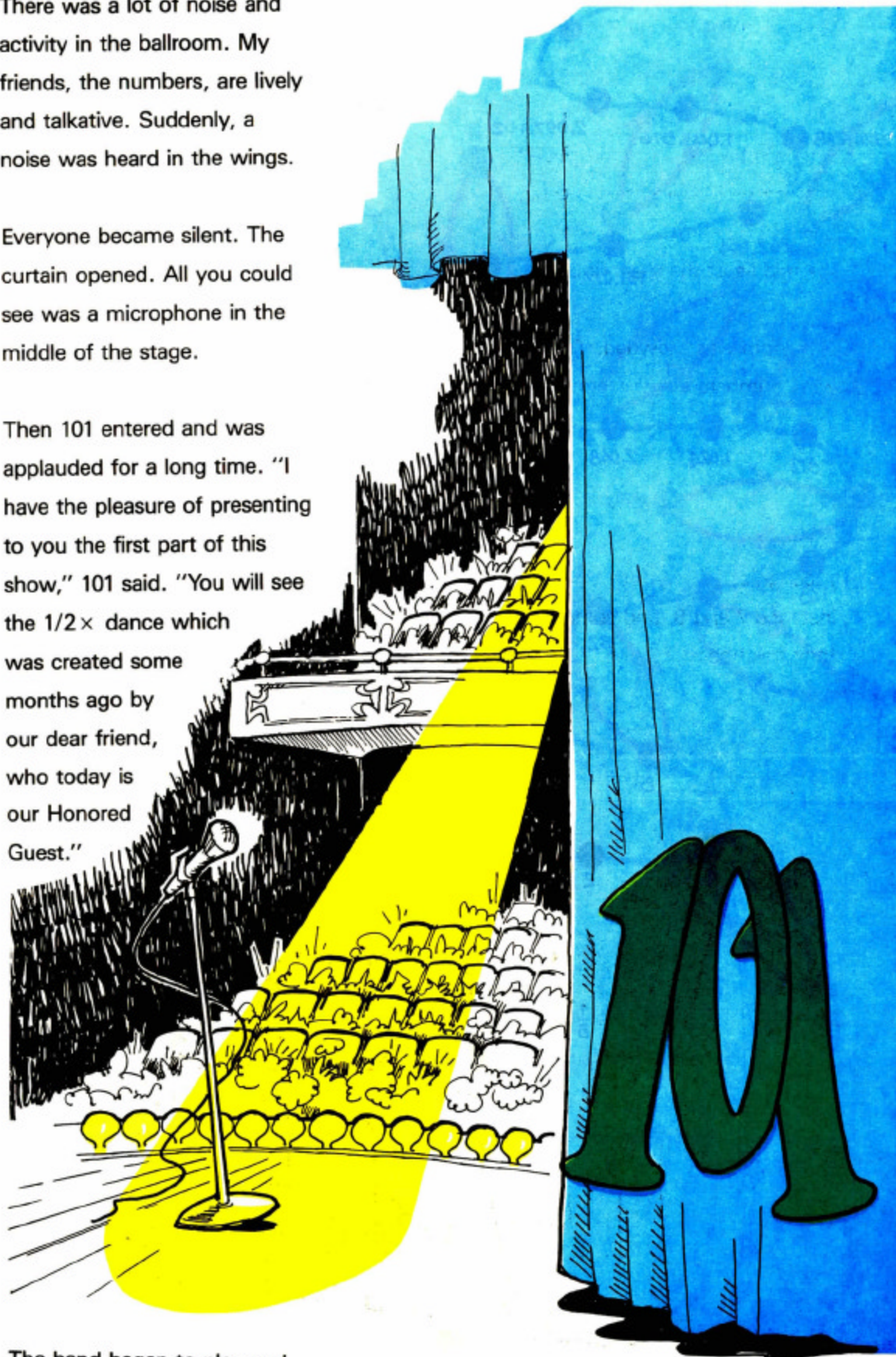
The President explained to me that they were the negative numbers. "Some of them have an important role in the show. You will become better acquainted with them later."



There was a lot of noise and activity in the ballroom. My friends, the numbers, are lively and talkative. Suddenly, a noise was heard in the wings.

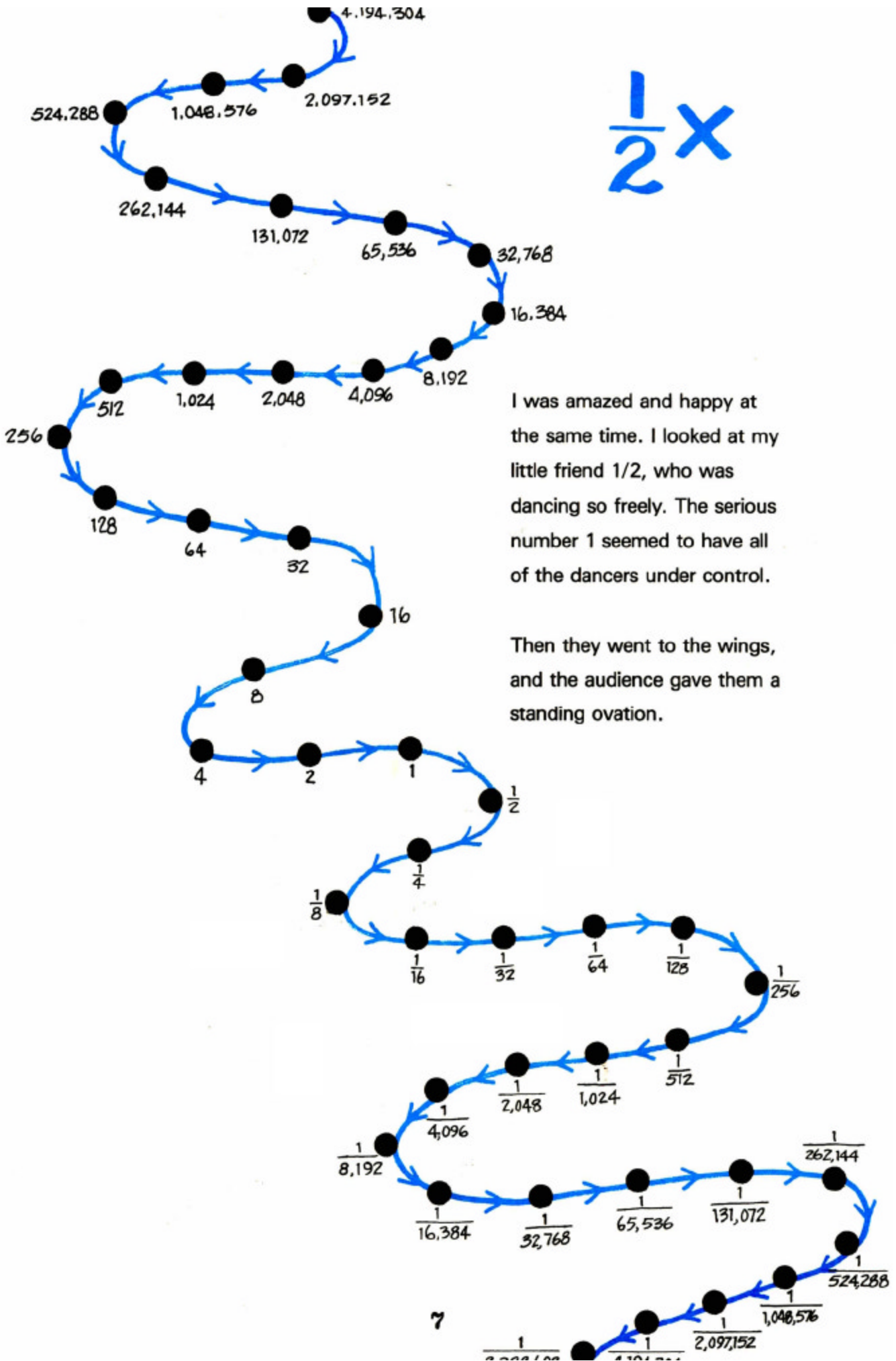
Everyone became silent. The curtain opened. All you could see was a microphone in the middle of the stage.

Then 101 entered and was applauded for a long time. "I have the pleasure of presenting to you the first part of this show," 101 said. "You will see the $1/2 \times$ dance which was created some months ago by our dear friend, who today is our Honored Guest."



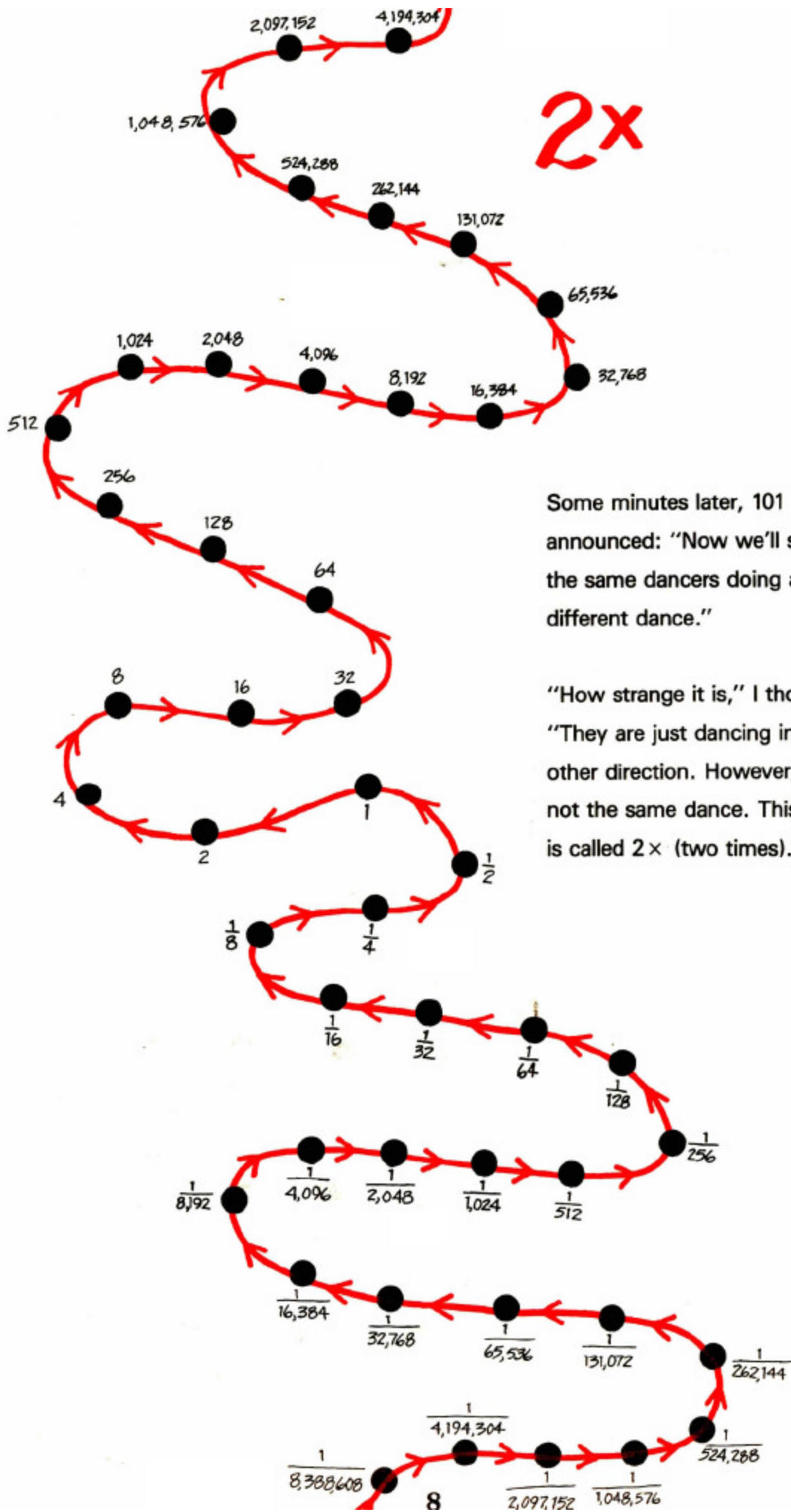
The band began to play and the dancers entered.

$\frac{1}{2} \times$



I was amazed and happy at the same time. I looked at my little friend $\frac{1}{2}$, who was dancing so freely. The serious number 1 seemed to have all of the dancers under control.

Then they went to the wings, and the audience gave them a standing ovation.



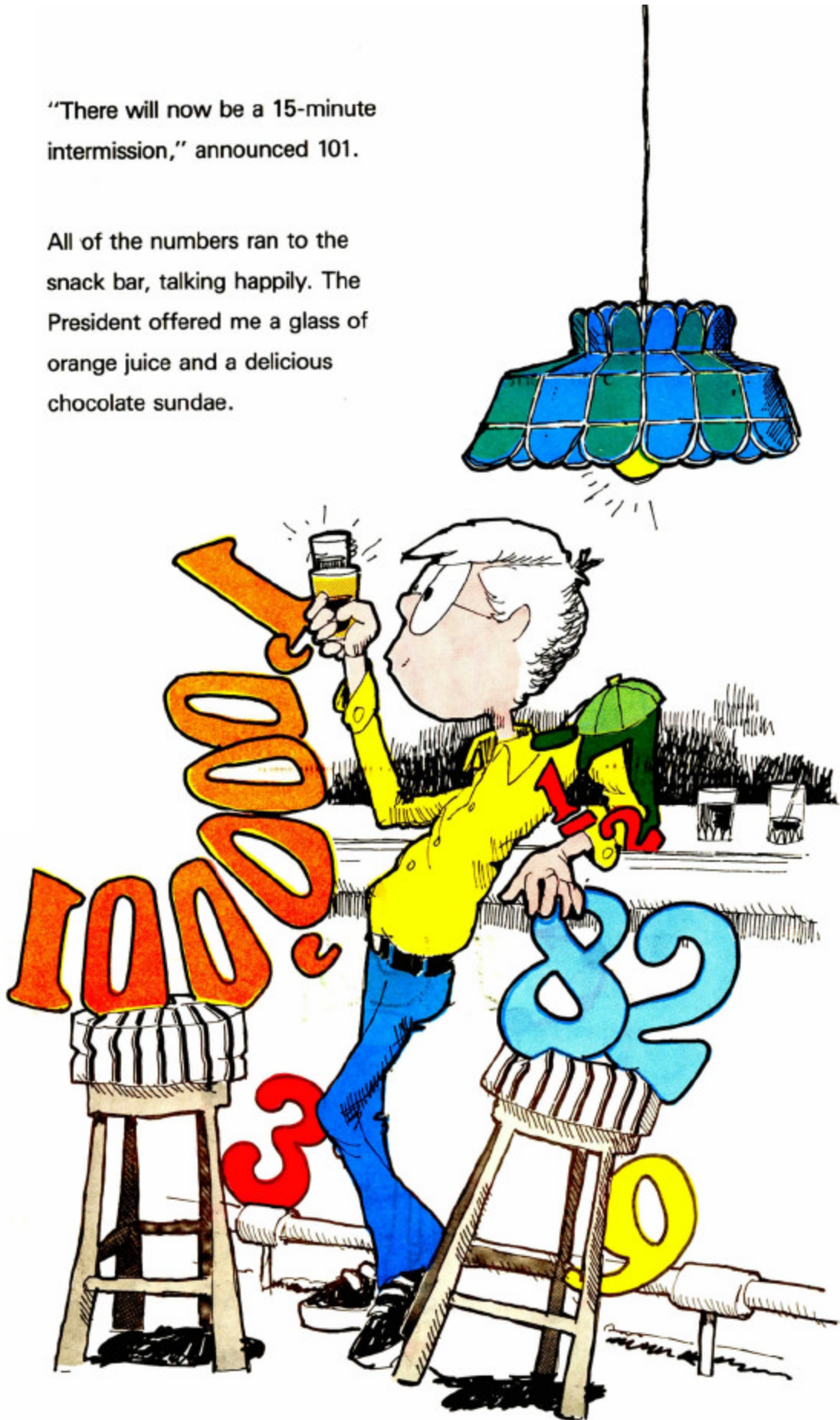
2x

Some minutes later, 101 announced: "Now we'll see the same dancers doing a different dance."

"How strange it is," I thought. "They are just dancing in the other direction. However, it is not the same dance. This one is called 2x (two times)."

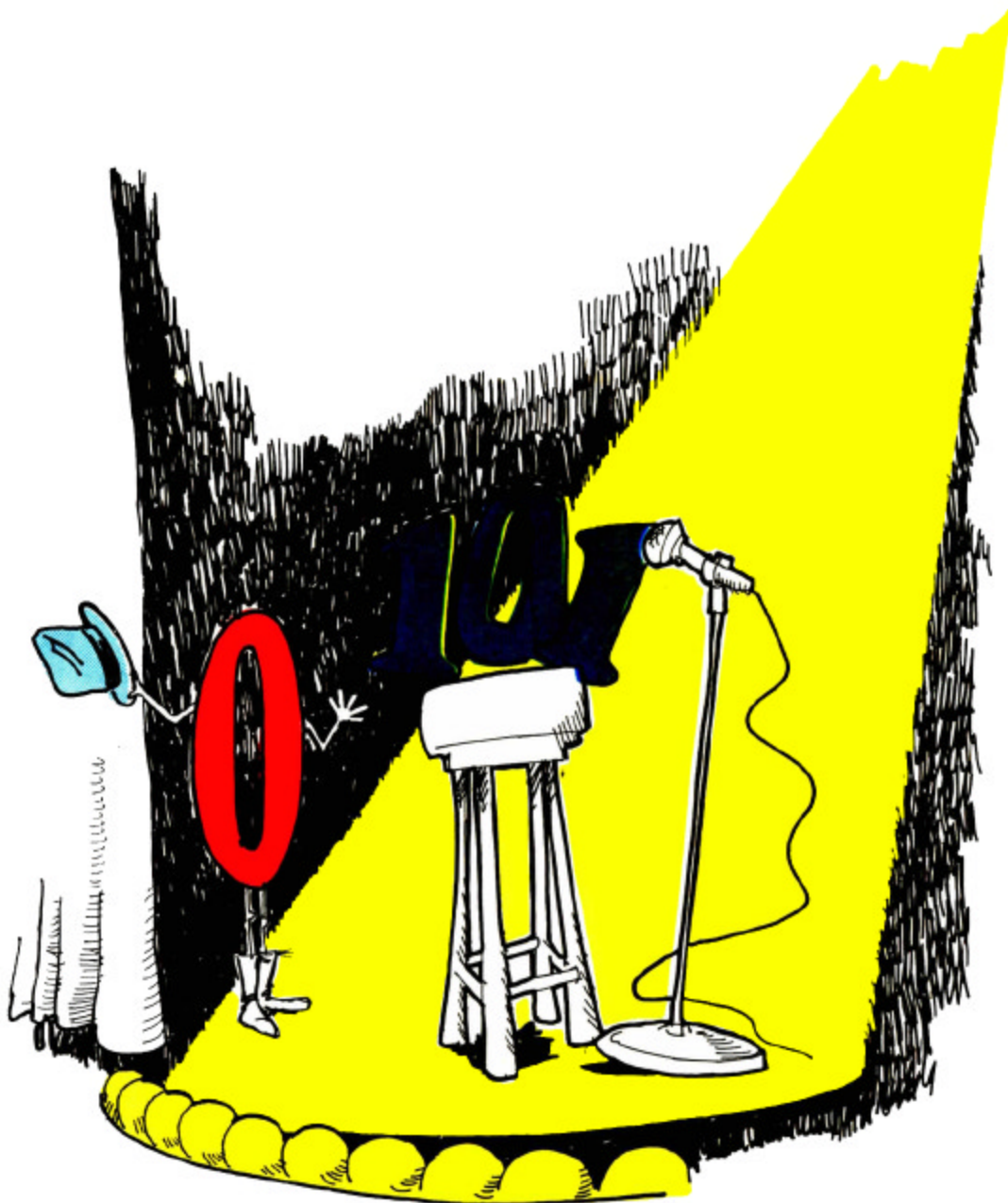
“There will now be a 15-minute intermission,” announced 101.

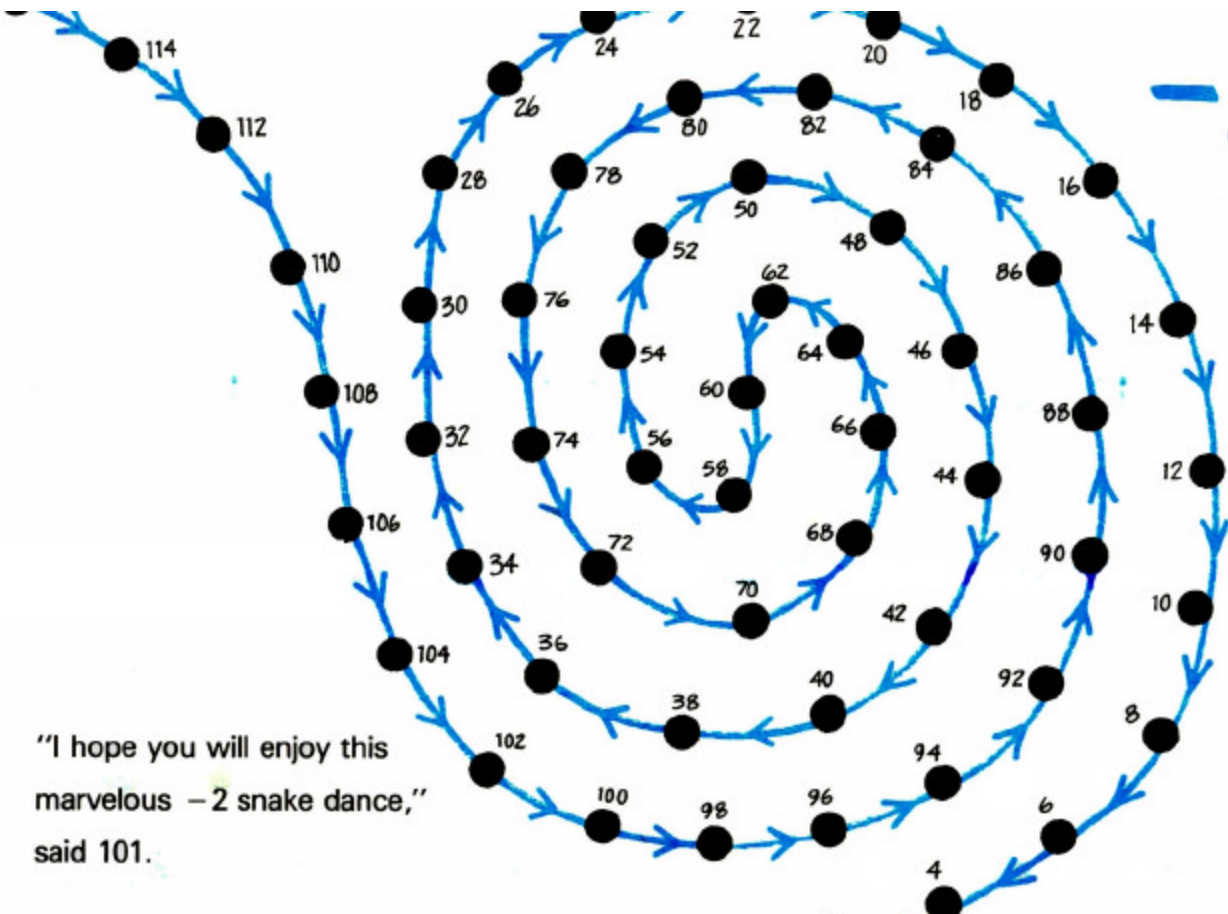
All of the numbers ran to the snack bar, talking happily. The President offered me a glass of orange juice and a delicious chocolate sundae.



The bell rang and we went back to our seats. The curtain opened for the second part of the show.

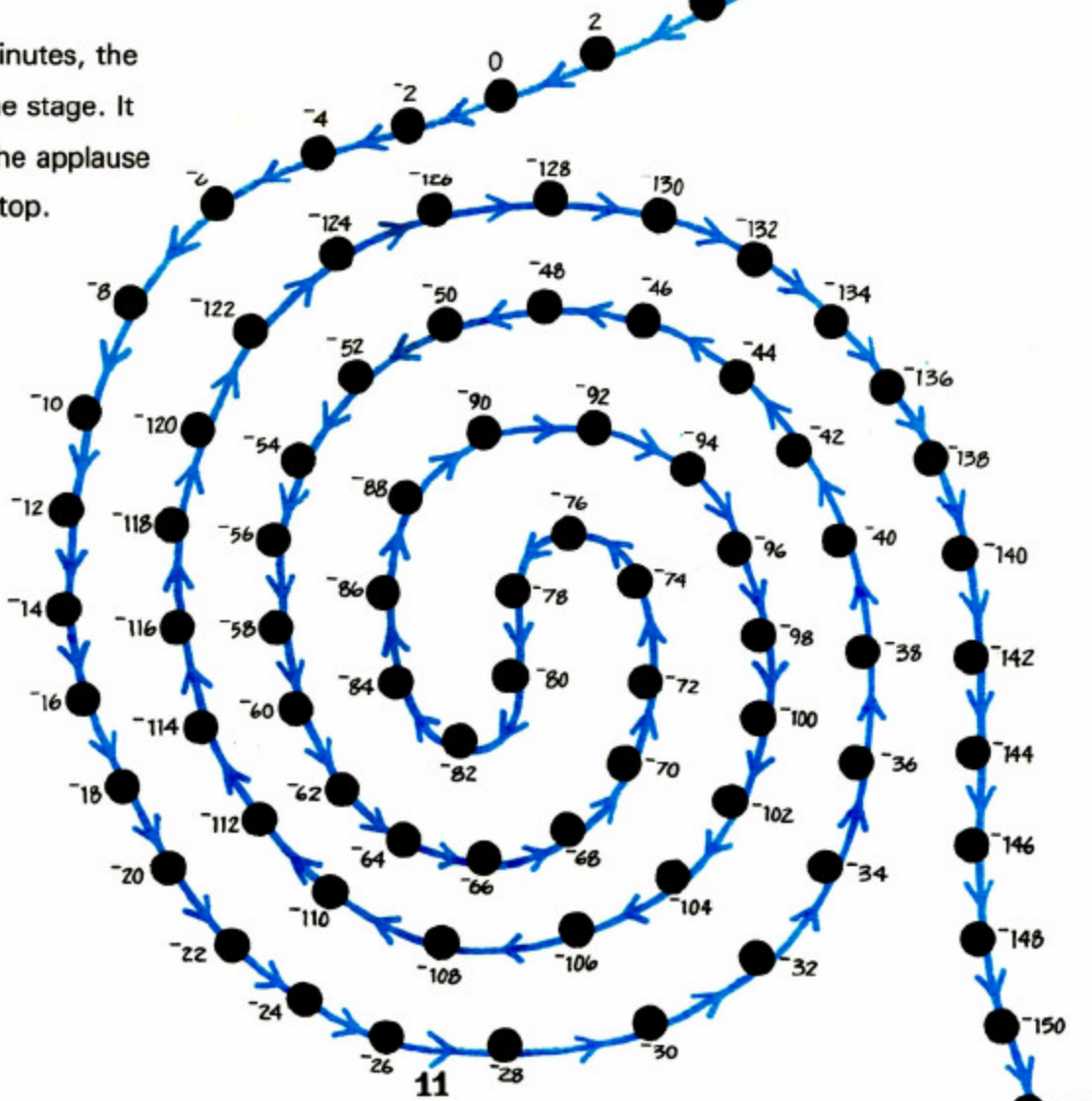
“The ballet we are going to see now,” said the number 101, “was created especially for this show by our friend 0. It is danced by 0 and by two kinds of dancers, who come from two different countries. However, our friend 0 is a citizen of neither of these countries.”

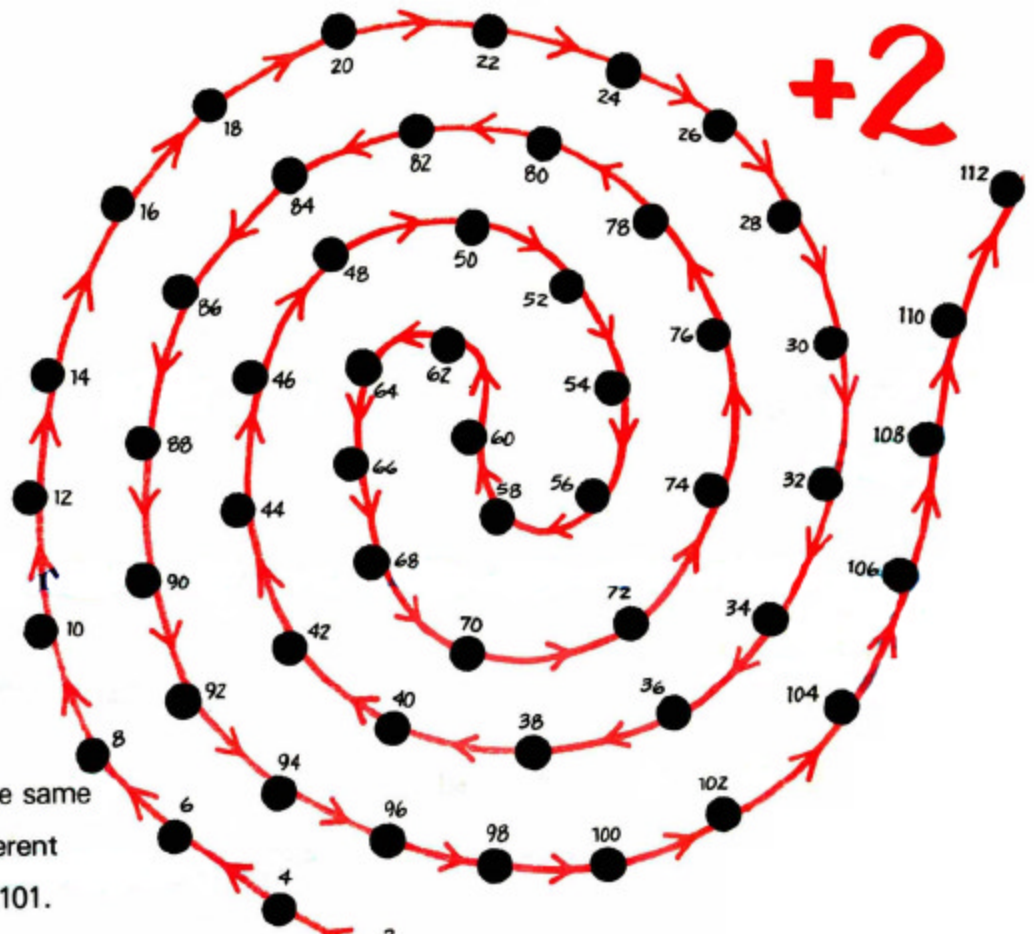




"I hope you will enjoy this marvelous -2 snake dance," said 101.

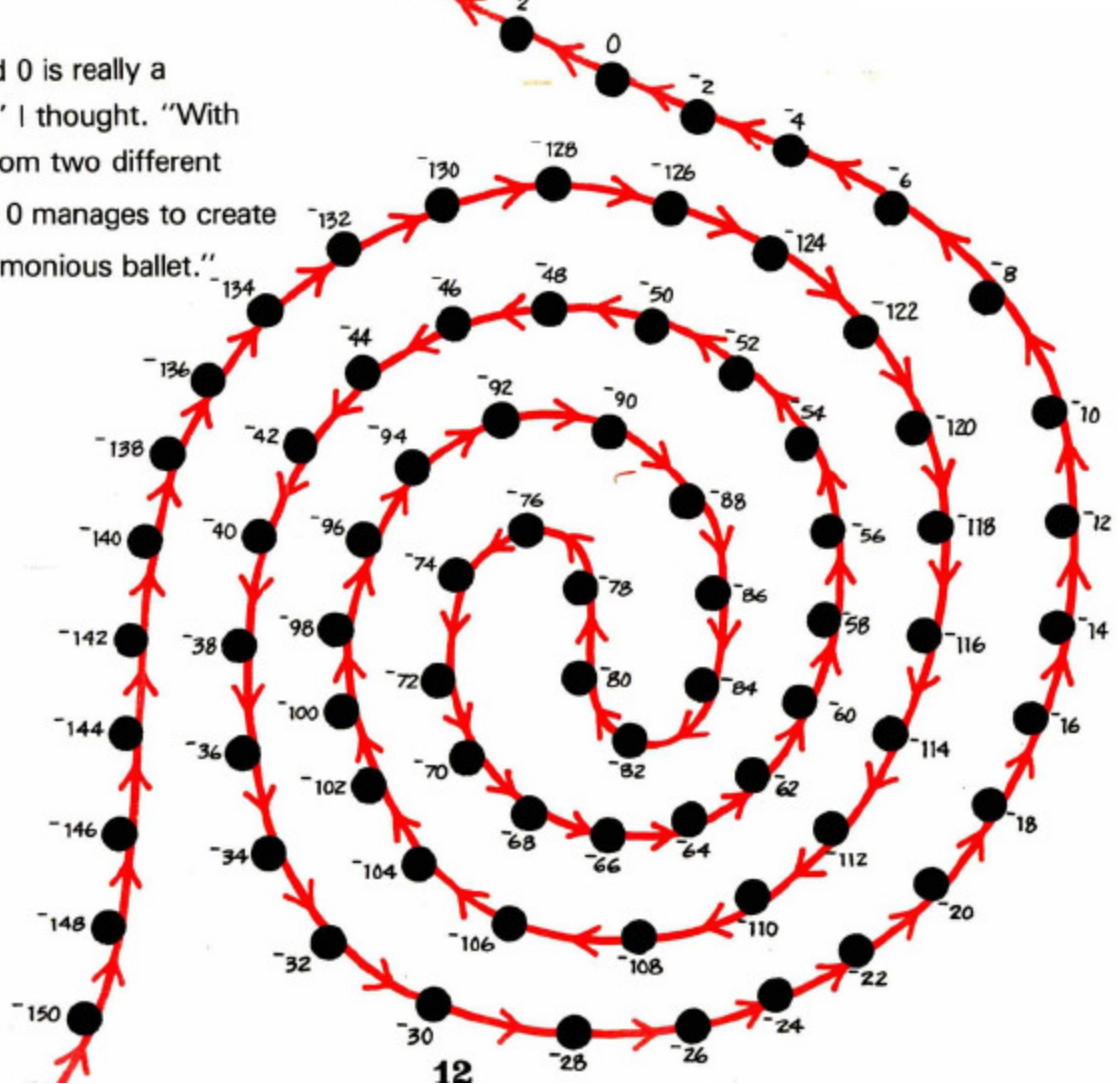
After a few minutes, the dancers left the stage. It seemed that the applause would never stop.





"Now we will see the same dancers doing a different dance," announced 101.

"My friend 0 is really a magician," I thought. "With dancers from two different countries, 0 manages to create a very harmonious ballet."

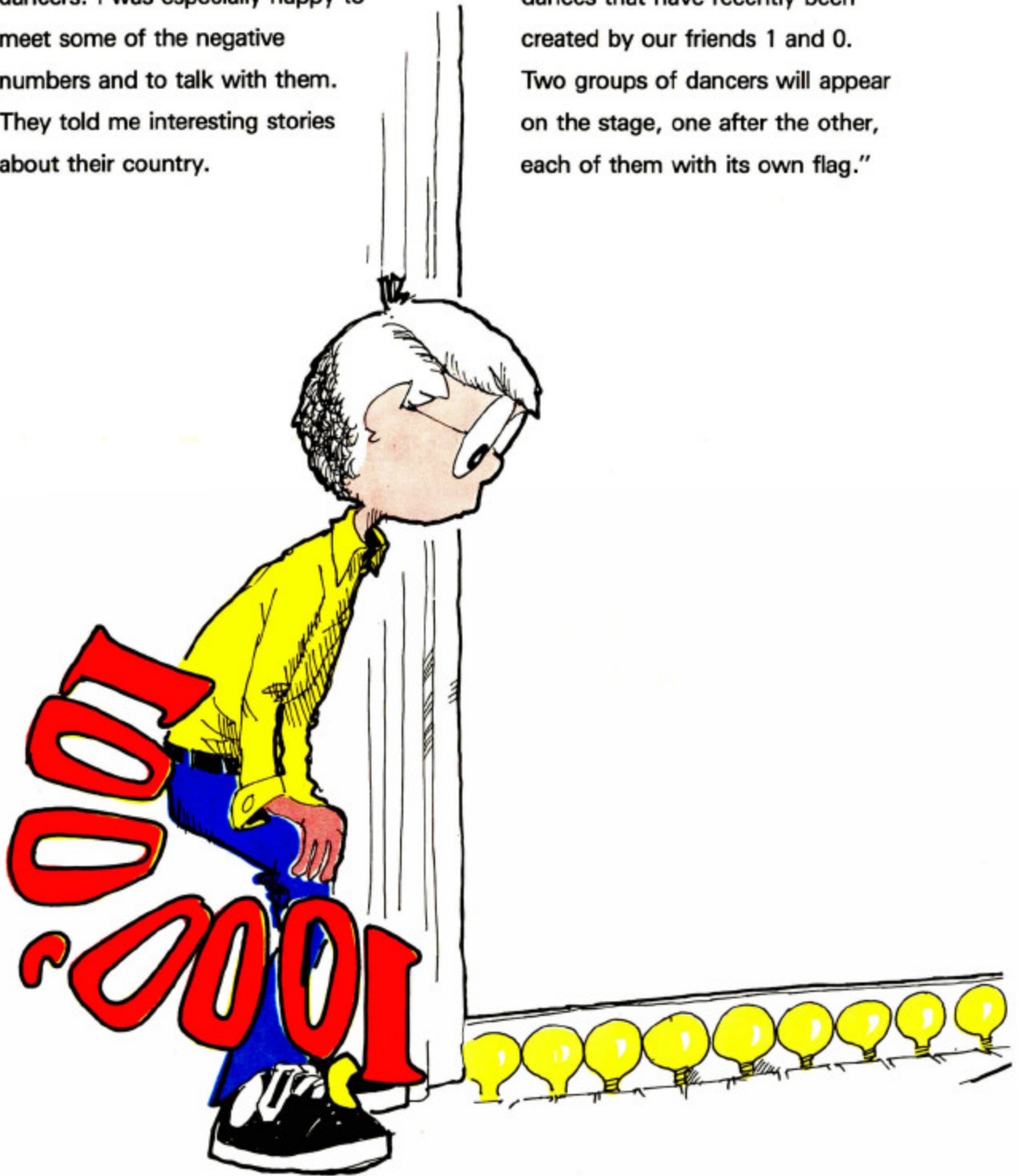


"There will now be a 10-minute intermission," announced 101.

We went backstage and the President introduced me to the dancers. I was especially happy to meet some of the negative numbers and to talk with them. They told me interesting stories about their country.

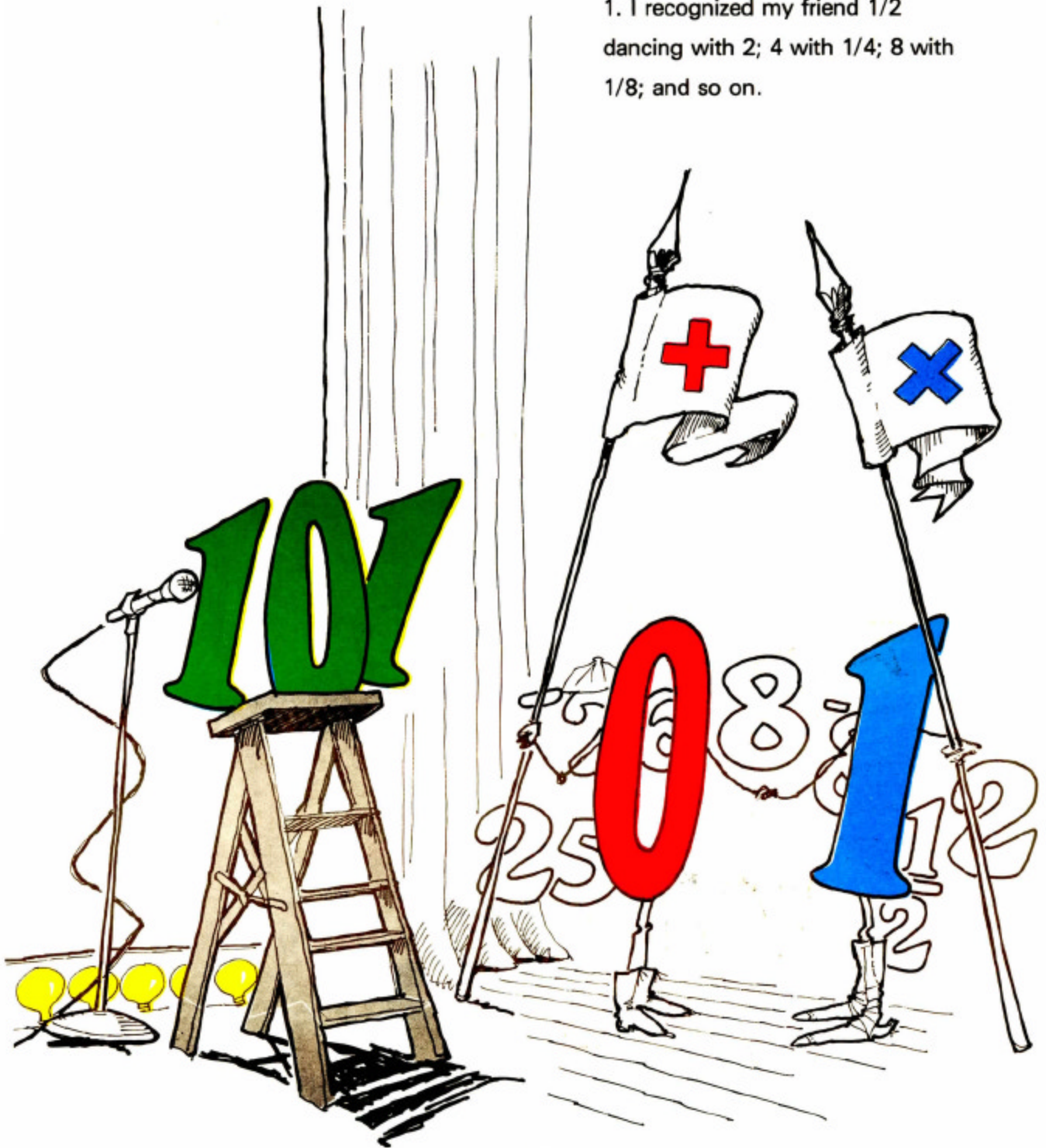
The bell rang and we returned to the ballroom.

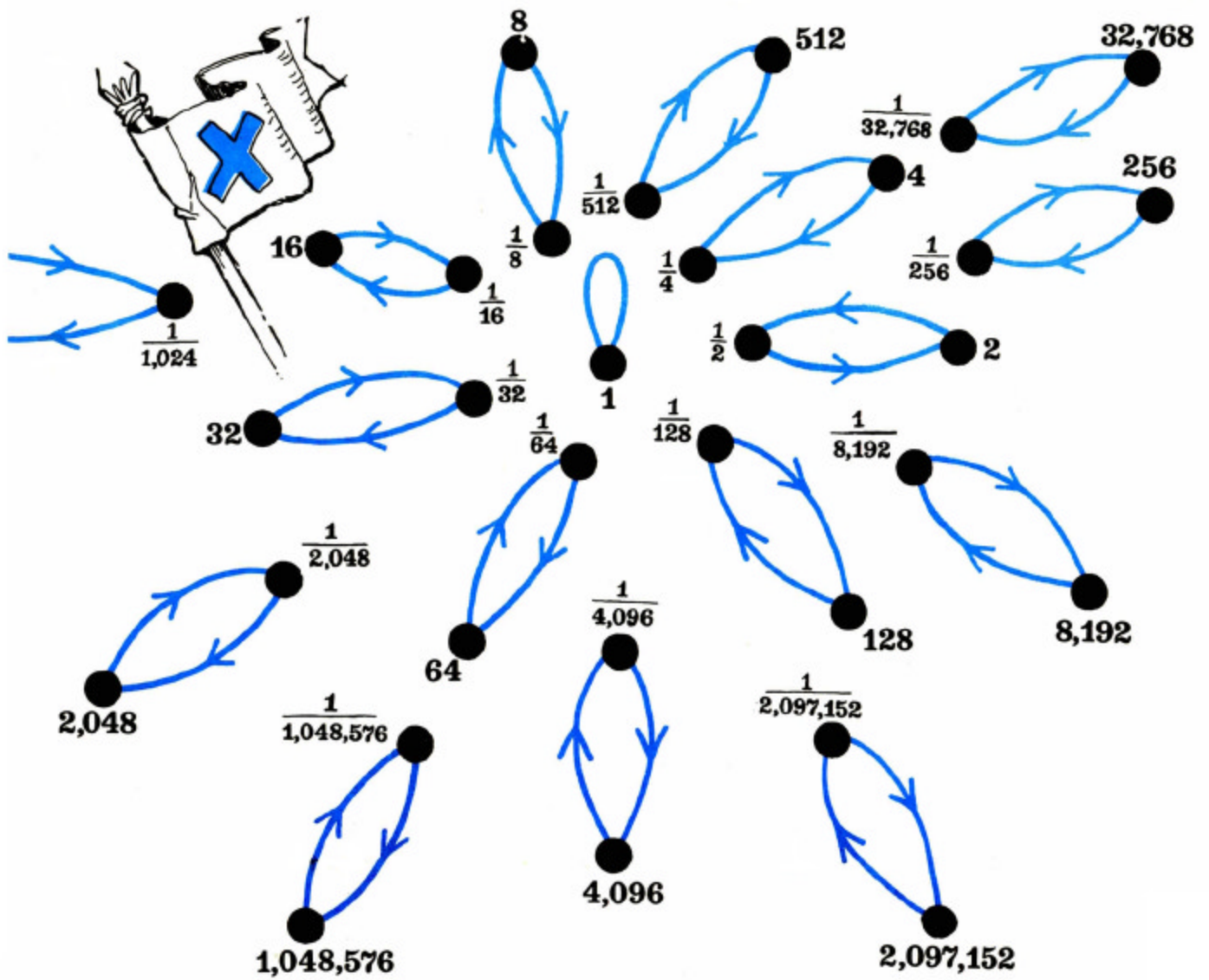
"For the third part of this show," said 101, "you will see two new dances that have recently been created by our friends 1 and 0. Two groups of dancers will appear on the stage, one after the other, each of them with its own flag."



The curtain opened and 1's group came out onto the stage.

The number 1 was dancing alone very freely in the middle of the stage and all of the other dancers were dancing two by two around 1. I recognized my friend $1/2$ dancing with 2; 4 with $1/4$; 8 with $1/8$; and so on.





"What a marvelous ballet," I said to the President. And I wrote in my notebook:

$$1 \times 1 = 1$$

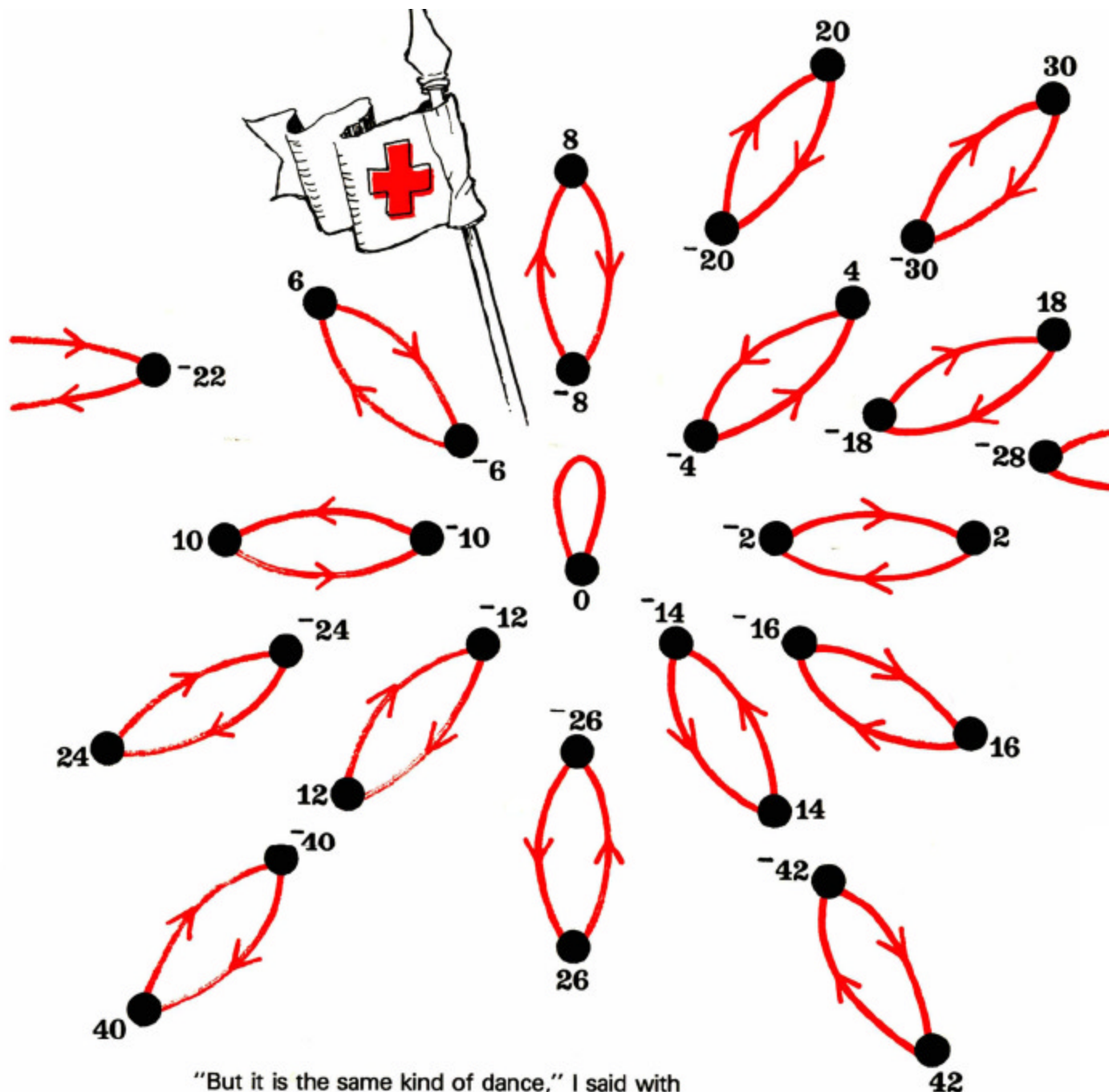
$$2 \times 1/2 = 1 = 1/2 \times 2$$

$$4 \times 1/4 = 1 = 1/4 \times 4$$

$$8 \times 1/8 = 1 = 1/8 \times 8$$

and so on.

The dancers left the stage and were immediately replaced by 0's group.



"But it is the same kind of dance," I said with astonishment to the President, who smiled and then replied:

"The dance looks the same, but it has a different meaning."

The President wrote in my notebook:

$$0 + 0 = 0$$

$$2 + -2 = 0 = -2 + 2$$

$$4 + -4 = 0 = -4 + 4$$

$$6 + -6 = 0 = -6 + 6$$

and so on.

“There will be a 5-minute intermission before the last part of the show,” announced 101.

We didn’t leave our seats.

“We had a very hard time with the numbers 0 and 1,” said the President. “But I have to admit that they have organized a very successful show. Both of them play an important role in the

World of Numbers. They are very competitive, but also very creative. Furthermore, many numbers were very devoted and agreed to dance in both groups.”

“That’s right,” I observed. “All of the whole numbers in 1’s group also danced in 0’s group.”



I was feeling lonely one evening. For a very long time, I had not received any news from my best friends, the numbers. Usually, as least one of them calls me every day.

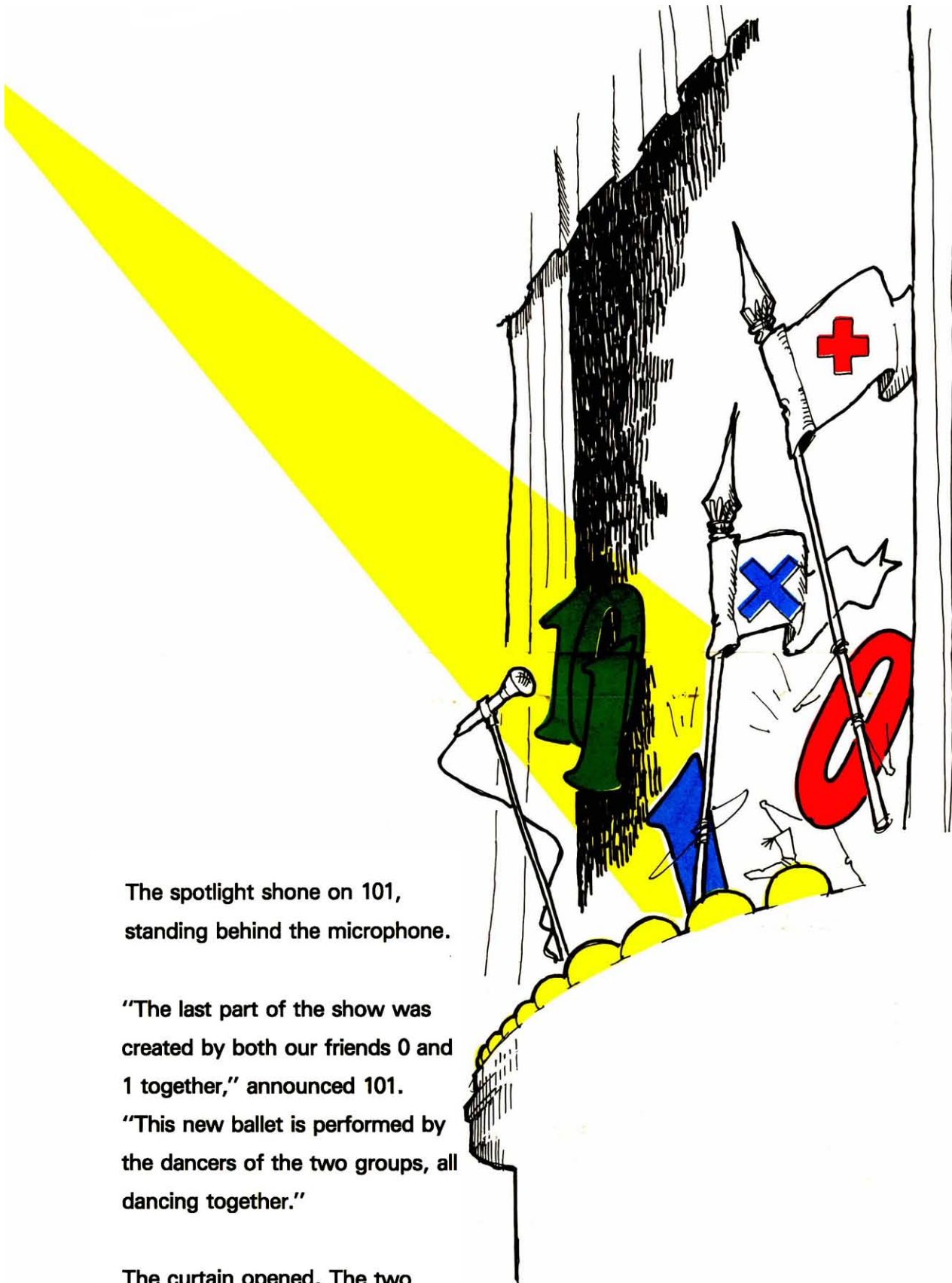
They always have some nice stories to tell me. So many people live in the strange World of Numbers, that almost every day some new, interesting event takes place.

At the end of this month, I shall be 10 years old. I always like to have my friends around me for my birthday. "Perhaps they have forgotten me," I thought sadly.

Just at that moment, the doorbell rang. It was my little friend, the number $1/2$.

"We are preparing a big show in your honor," $1/2$ said. "It is a secret. But I am too happy to keep it to myself. I have to share it with you."



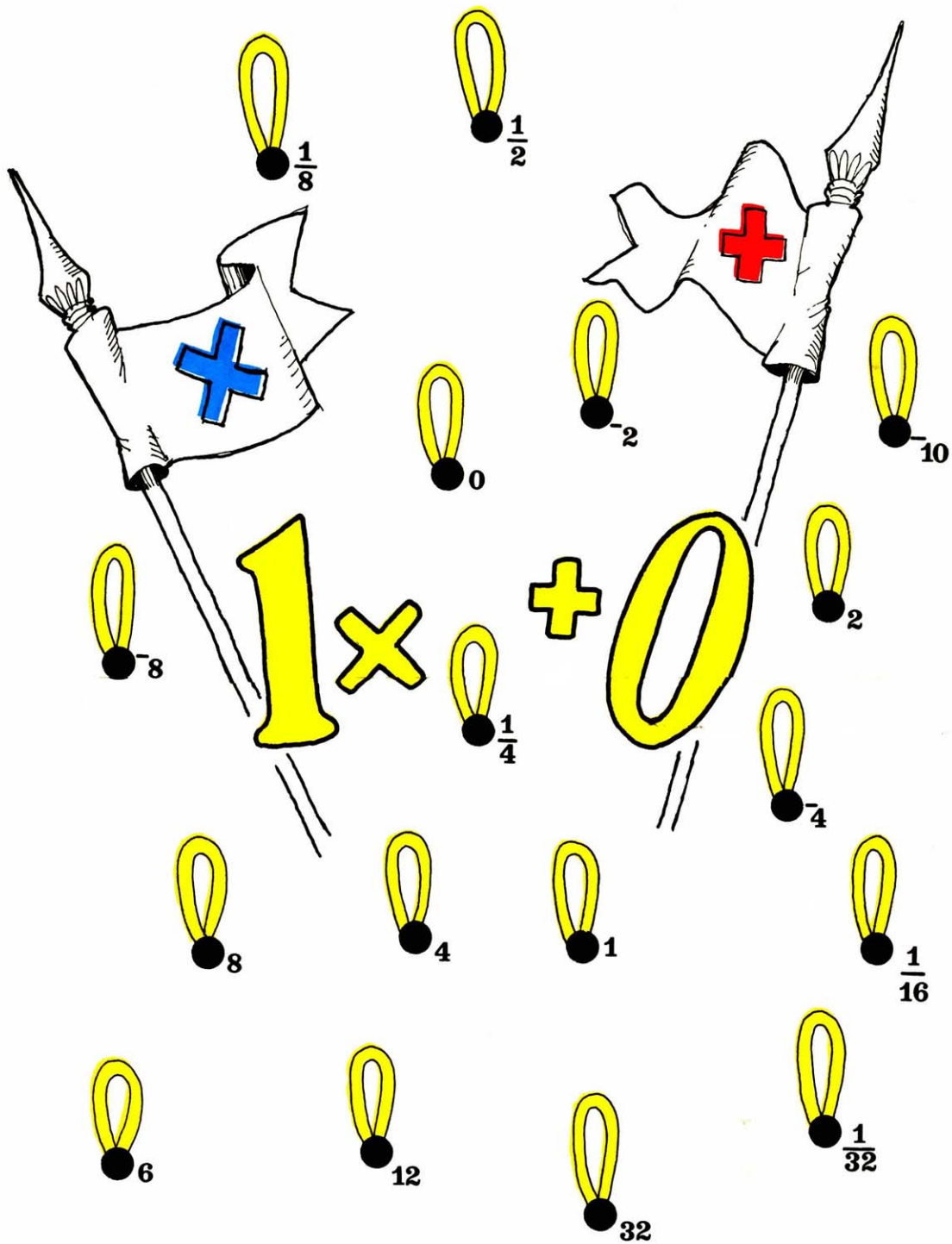


The spotlight shone on 101, standing behind the microphone.

“The last part of the show was created by both our friends 0 and 1 together,” announced 101.

“This new ballet is performed by the dancers of the two groups, all dancing together.”

The curtain opened. The two flags were on the stage.



All of the dancers were dancing freely by themselves around the numbers 0 and 1.

I was amazed. It was a marvelous ballet, but I didn't understand right away what it meant.

"It is one of the most interesting dances in the World of Numbers," said the President. "It shows the importance of the numbers 0 and 1. You can call it:

+0 or 1×

whichever you like.



He wrote in my notebook:

$$\begin{aligned}2 + 0 &= 2 = 0 + 2 \\-2 + 0 &= -2 = 0 + -2 \\4 + 0 &= 4 = 0 + 4 \\-4 + 0 &= -4 = 0 + -4 \\6 + 0 &= 6 = 0 + 6\end{aligned}$$

and so on.



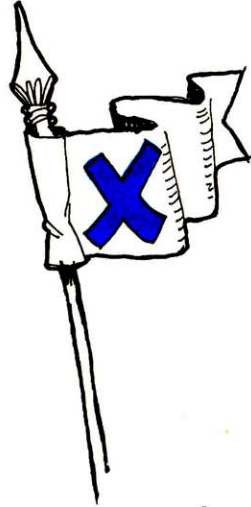
$$\begin{aligned}2 \times 1 &= 2 = 1 \times 2 \\1/2 \times 1 &= 1/2 = 1 \times 1/2 \\4 \times 1 &= 4 = 1 \times 4 \\1/4 \times 1 &= 1/4 = 1 \times 1/4 \\8 \times 1 &= 8 = 1 \times 8\end{aligned}$$

and so on.

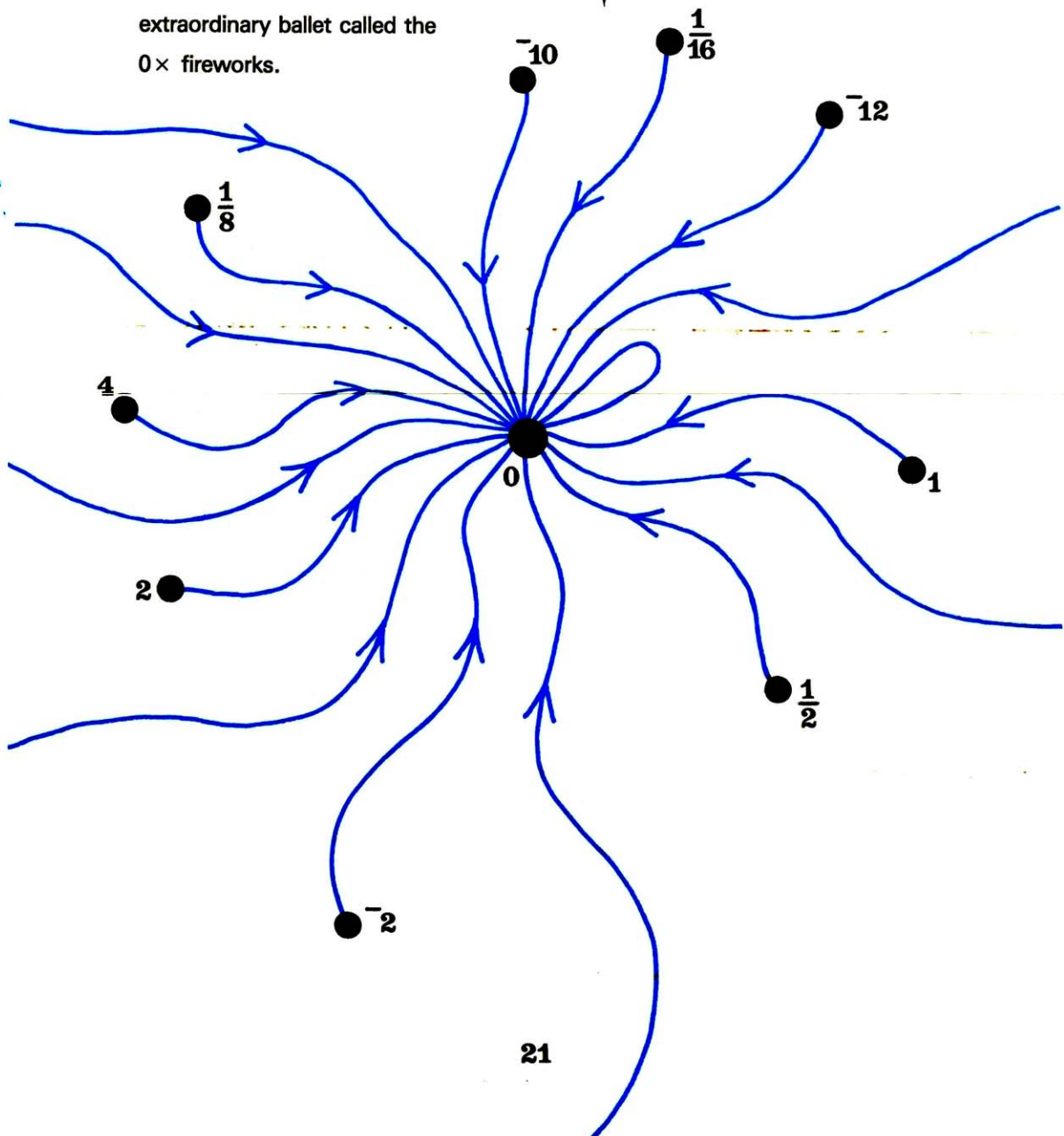
The dancers left the stage. The audience was excited and applauded them for a very long time, asking loudly for an encore.

Finally, 101 announced: "At your request, the dancers have agreed to perform one last dance, which has just now been created by our friend 0."

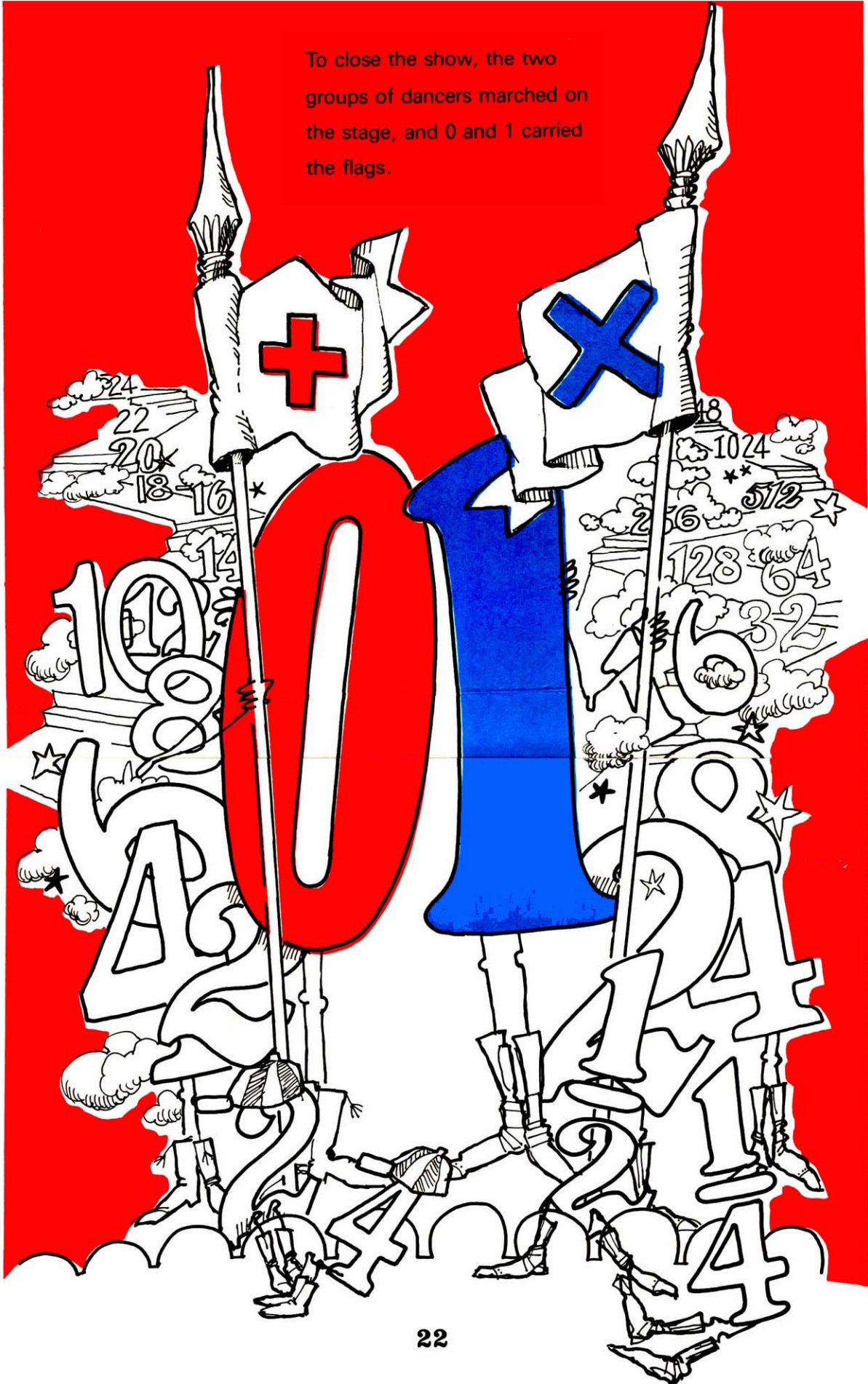
The curtain opened. The flag of 1's group was on the scene. And we could see this extraordinary ballet called the $0 \times$ fireworks.



$0 \times$



To close the show, the two groups of dancers marched on the stage, and 0 and 1 carried the flags.



Then the President led me out
in front of all of the numbers
as they stood, applauding, and
gave me this marvelous medal.



Stories by Frederique

Ages 5 to 8

Summer School in the Old Days
Playful Numbers
81 Roses
I Am a Very Happy Boy
One Out of Seven
The Happy Puppet
The Old Shoemaker
Two by Two
The Little Dreamer
The Little Donkey
The Magic Box
The Baby is Born
The Weird Story of 24

Ages 8 to 12

Where's My Nose?
Singing Friends
Dancing Friends
The Living Lines
I Am Not My Name
Nabu Wins an Award
The Square Trap

Ages 10 to 14

The Hidden Treasure
A Very Strange Neighborhood
Election in the Number World
A Valentine Mystery

It is Nabu's tenth birthday. In his honor, his friends, the numbers, have organized a big show that involves many numbers, some of whom he has never even met before, in some spectacular dances. 0 and 1 forget their usual rivalry in order to cooperate in the choreography of several ballets of great numerical interest. The evening reaches its climax in the presentation of a special award to Nabu.

"Nabu Wins an Award" is a story that exhibits many important aspects of the structure of the system of numbers. One dance is a previous one danced backwards; other pairs of dances, while involving different dancers and different operations, are related in that they have identical choreographies.

This story provides many opportunities for discussion, which should be aimed at engendering a greater appreciation for these fundamental properties of the system of numbers, as well as for the central role that 0 and 1 play in that system.

Edward Martin