I AM NOT MY NAME

Pictures / Design
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by *Frédérique*

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My best friend, the number 0, was visiting me at home. 0 is very interesting like a lively newspaper. Each time we visit, 0 tells me a lot of stories about many things. The most interesting stories are about the adventures of the numbers.

While 0 and I were talking, the phone rang. It was my little friend ½ calling. ½ was very upset, crying and talking at the same time. I had trouble understanding what my little friend was trying to tell me. "...I lost my name...they gave me a new name... they change my name all the time..."

I tried to calm ½ but without success.

"I am completely lost...I don't know who I am anymore...I am so little...so afraid...they are making fun of me," ½ sobbed into the phone.
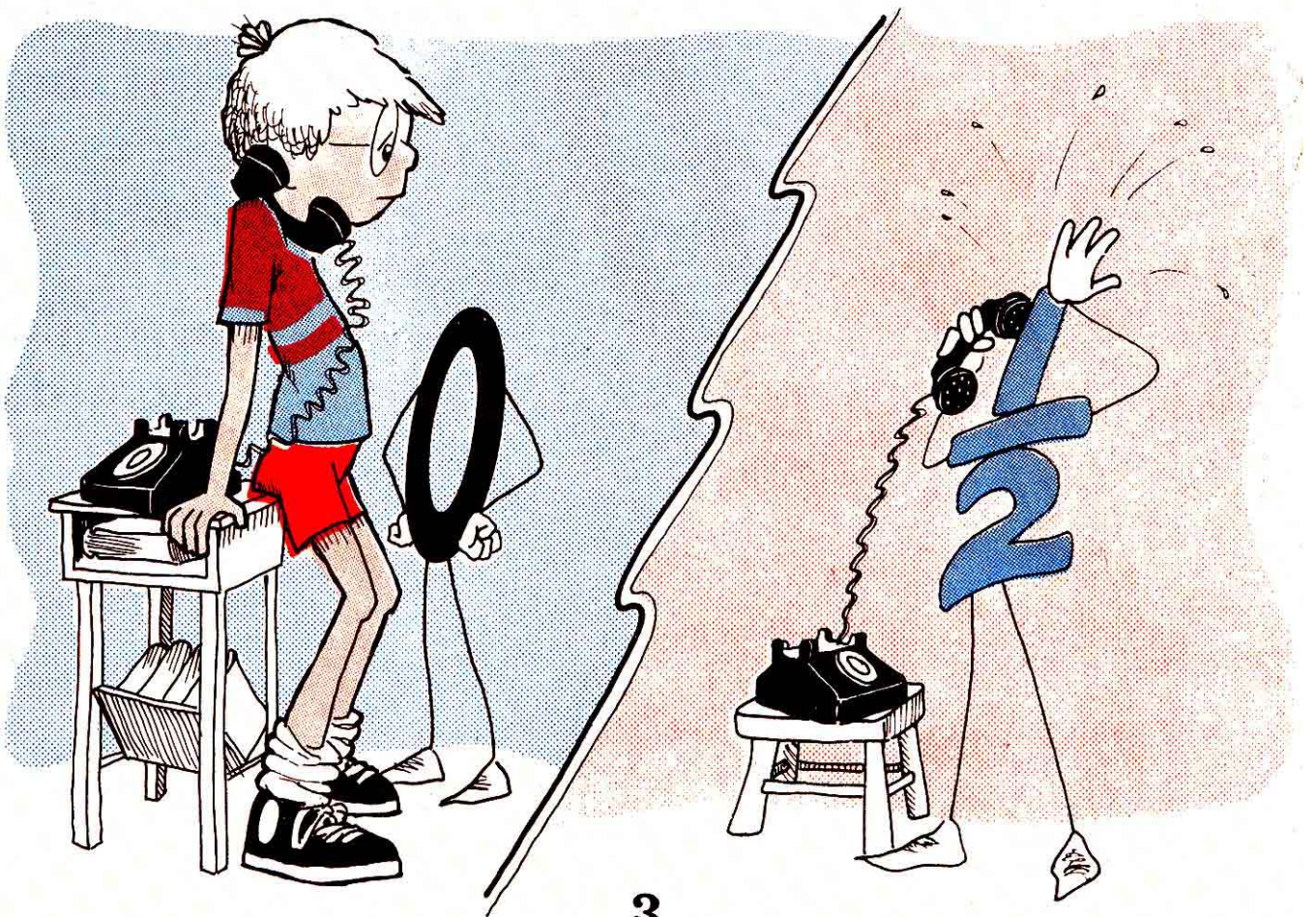
Finally, I convinced my little friend to come to my house immediately. I told 0 about the call; we were both amazed.

"What has happened to this poor fellow?" 0 said. "I don't know anything about this strange story." 0 looked very annoyed.
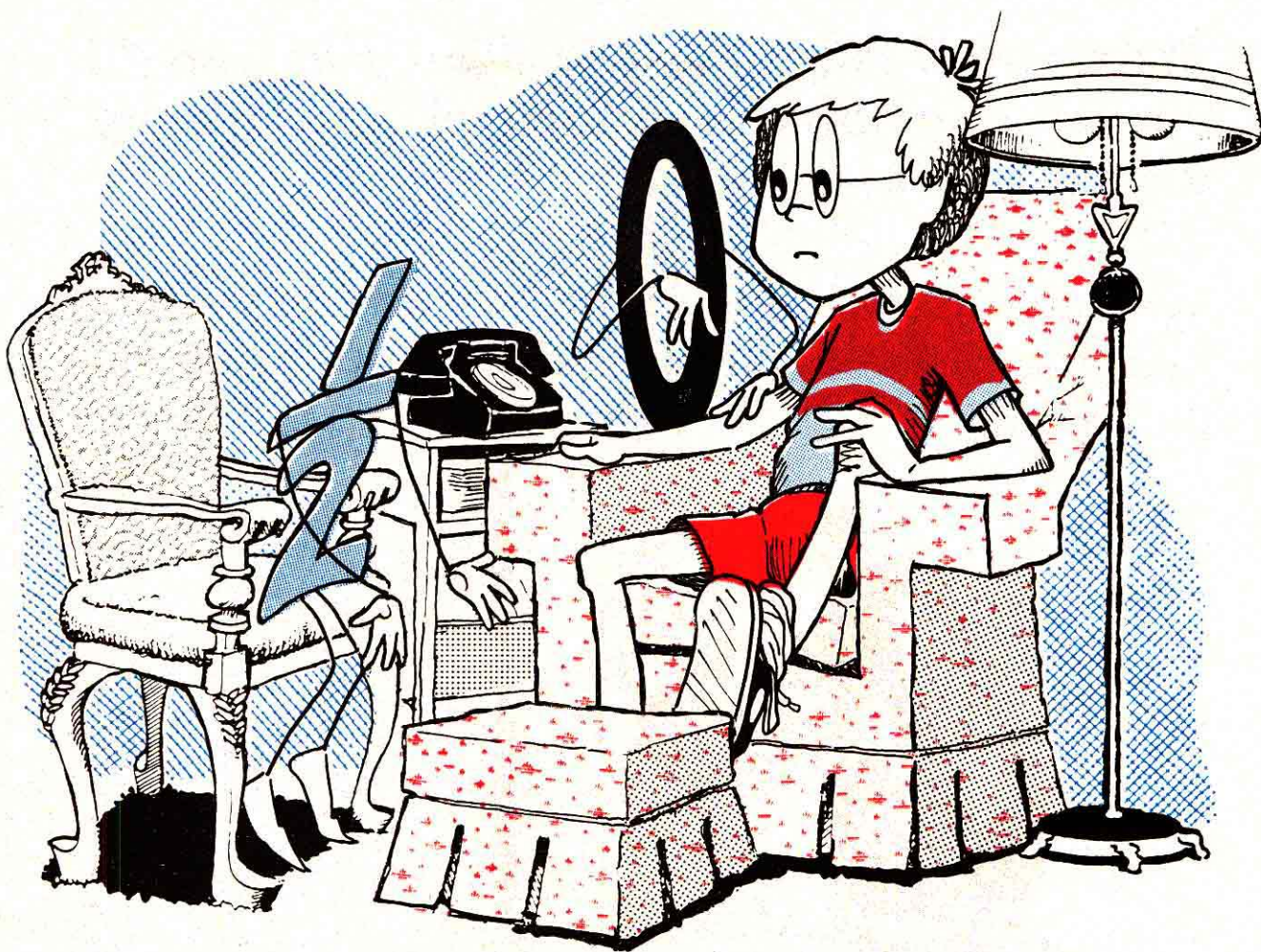
"$1/2$ is a nice friend," I observed, "but still very immature. Each time there is some trouble, $1/2$ cries and asks for help."

"That's right," agreed 0.

The doorbell rang; it was ½. "Dry your tears," I advised. "Sit down, relax, and tell us your story. We are your friends."

½ was silent for a long time. We couldn't wait to hear the sad tale, but we didn't want to rush our little friend.
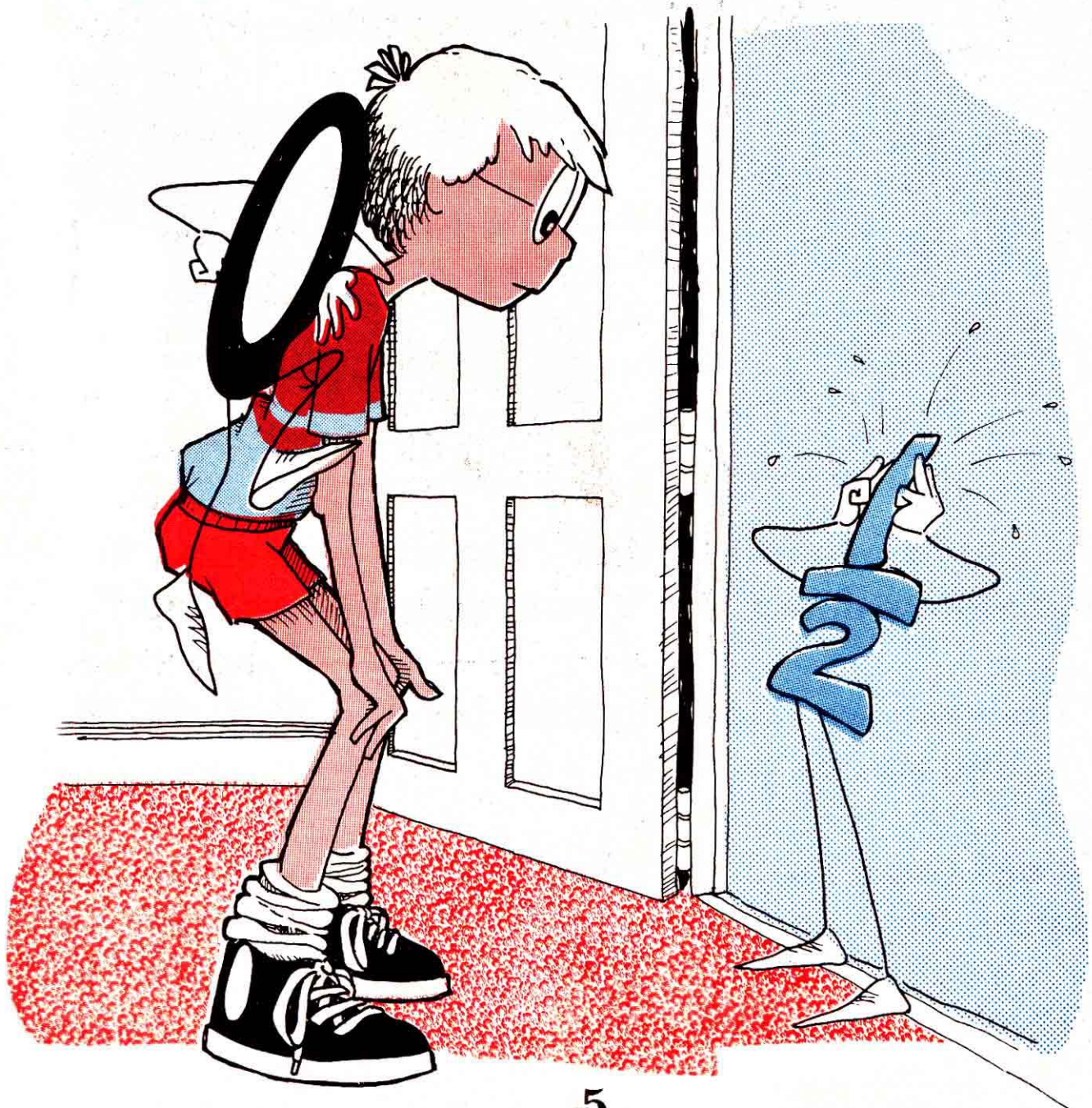
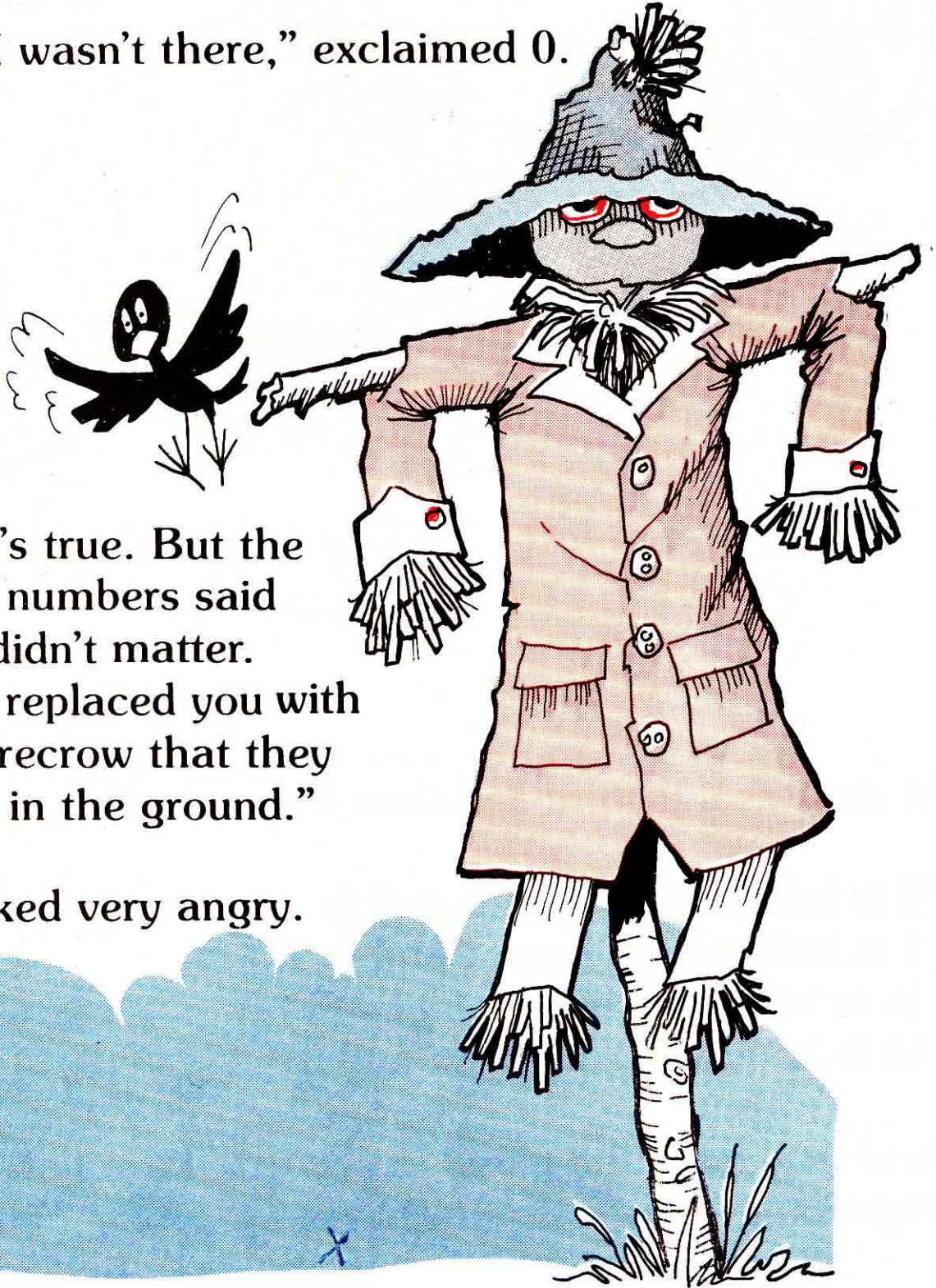At last $\frac{1}{2}$ began to speak. "Do you remember the marvelous dance you invented for me last year?"

"Yes, you were dancing with 16, 8, 4, 2, 1, $\frac{1}{4}$, $\frac{1}{8}$, $\frac{1}{16}$, and so on."

"I was there too," observed 0. "I took part in that dance. My role was very important."
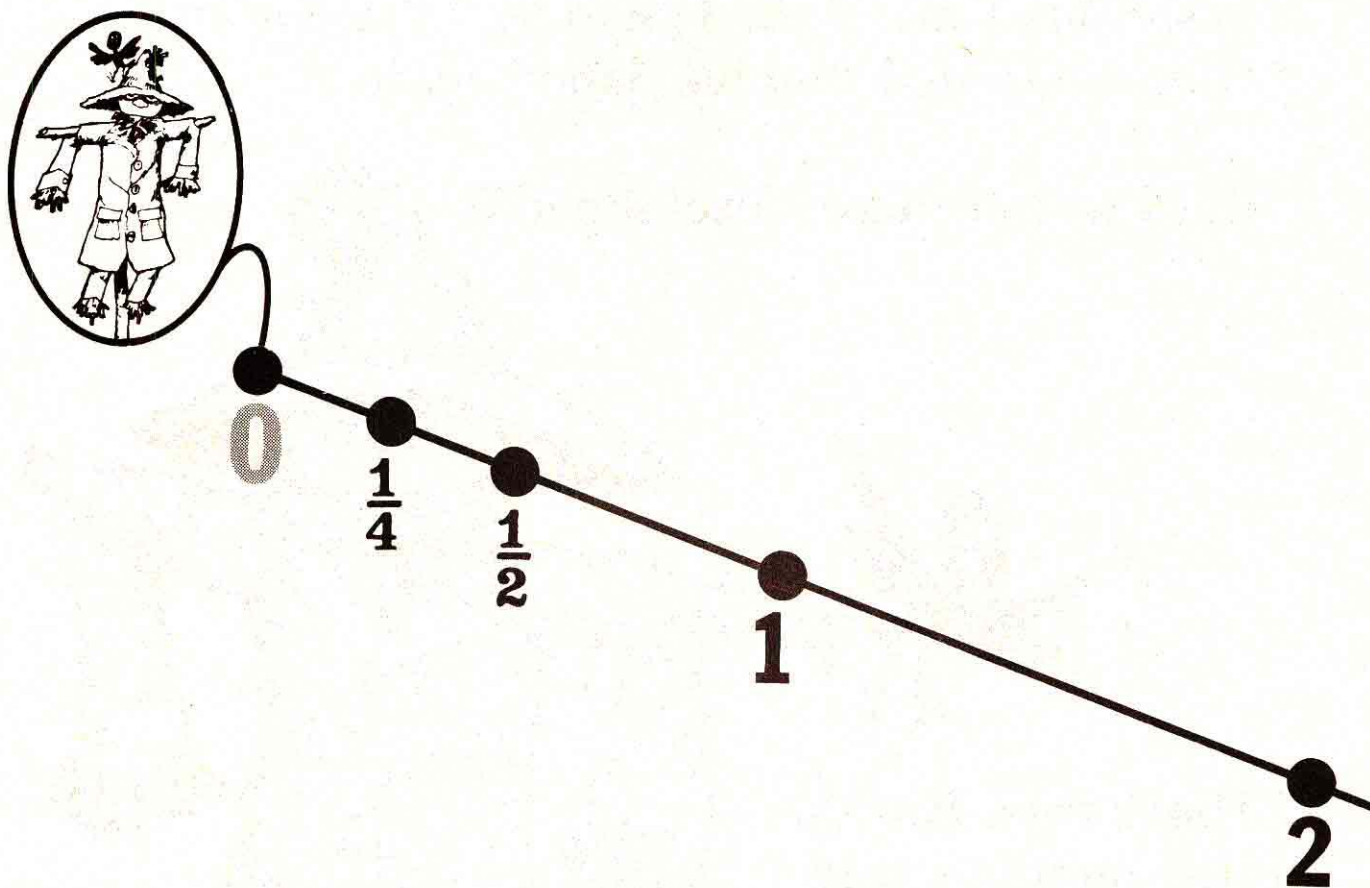
"That's right," we agreed.

"Yesterday I met 4, 2, 1, and $\frac{1}{4}$," $\frac{1}{2}$ went on. "They suggested that we dance again."

"But I wasn't there," exclaimed 0.

"That's true. But the other numbers said that didn't matter. They replaced you with a scarecrow that they stuck in the ground."

0 looked very angry.

½ drew this picture and then 0 muttered:

"2 is halfway between 4 and 0;
1 is halfway between 2 and 0;
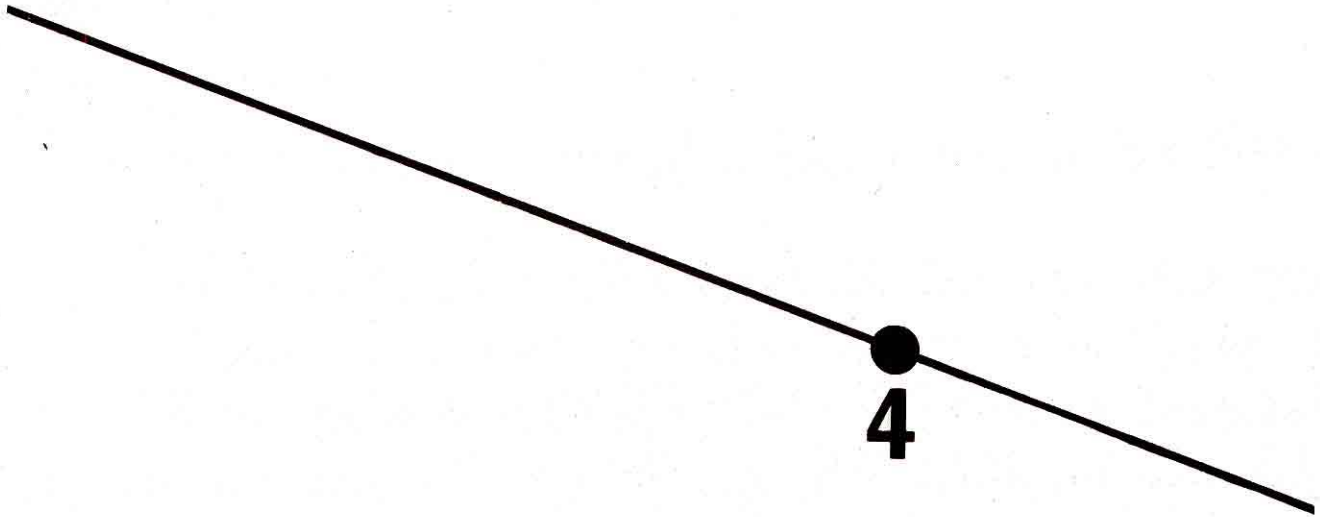½ is halfway between 1 and 0;
¼ is halfway between ½ and 0.
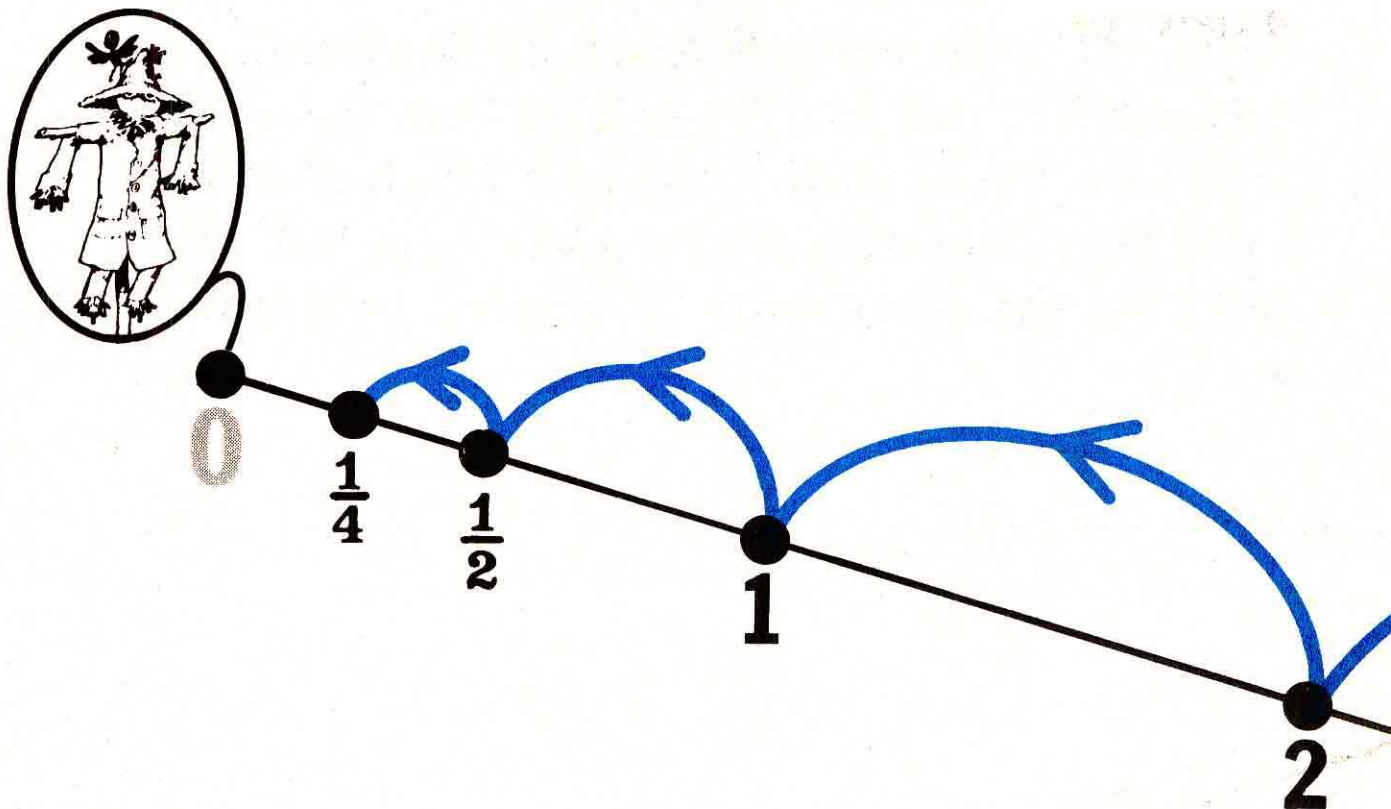
And they have the nerve to say that I am not important."

"Calm down," I said. "It's only a game. Let ½ tell the story."

"With the right hand, 4 takes 2's left hand because 2 is half of 4," explained our friend ½. "2 did the same with 1 because 1 is half of 2; 1 did the same with me because ½ is half of 1; and I did the same with ¼ because ¼ is half of ½."

4

TRY TO IMAGINE ½'s DANCE WITH THESE NUMBERS.

To make this story clearer, $\frac{1}{2}$ drew this picture.

"I am sure you did not have a lot of fun," said 0, "because there were not enough of you to make this dance worthwhile. Why didn't you also invite 8, 16, 32, 64, 128, 256, . . . , $\frac{1}{8}$, $\frac{1}{16}$, $\frac{1}{32}$, $\frac{1}{64}$, $\frac{1}{128}$, $\frac{1}{256}$, . . . ? You needed to have me there to lead the dance; you just don't have enough imagination."

0 was still in a bad mood.

"You are right," agreed ½. "The dance was boring. After a few minutes, my friends suggested playing a new game."

$$\frac{1}{2}x$$

4
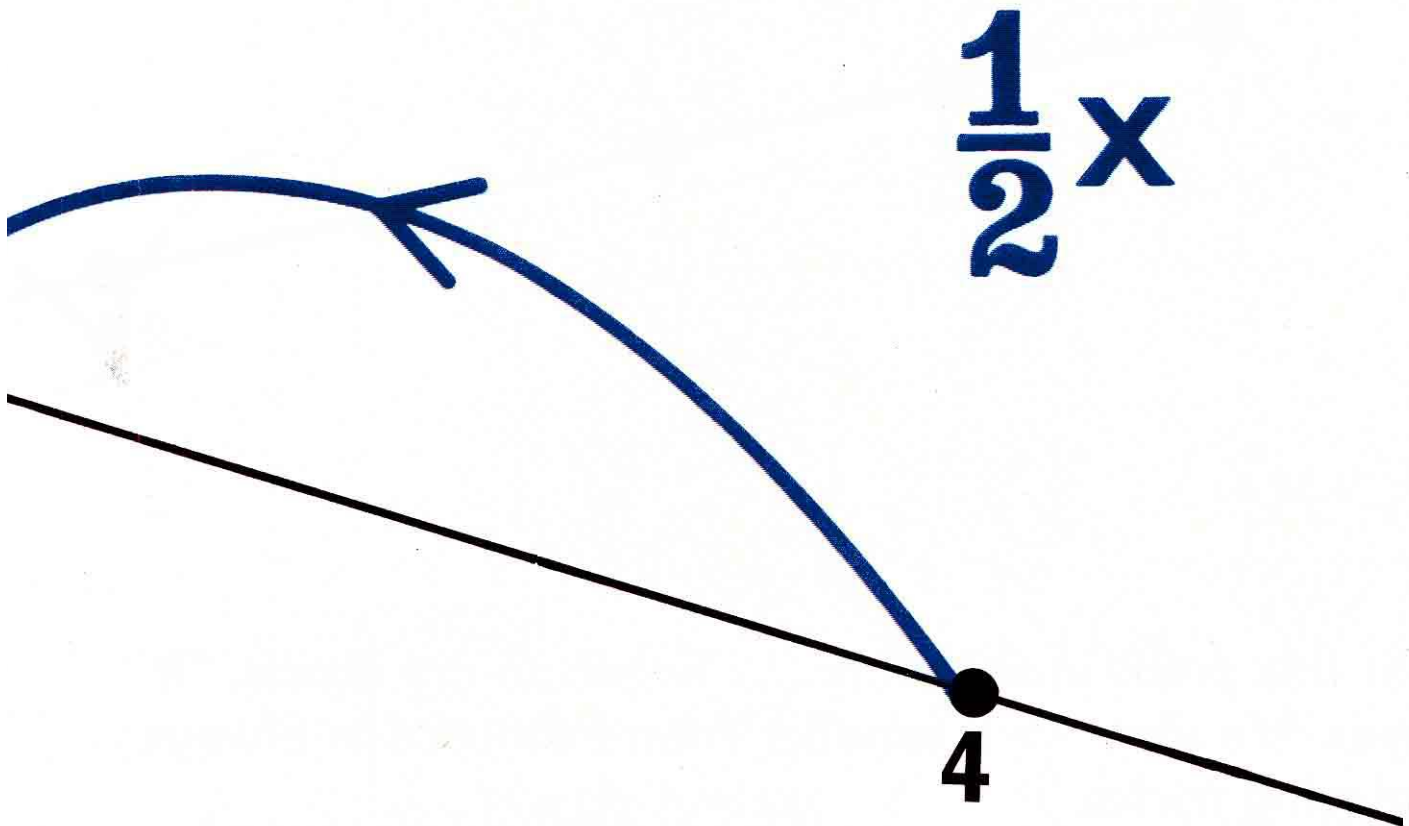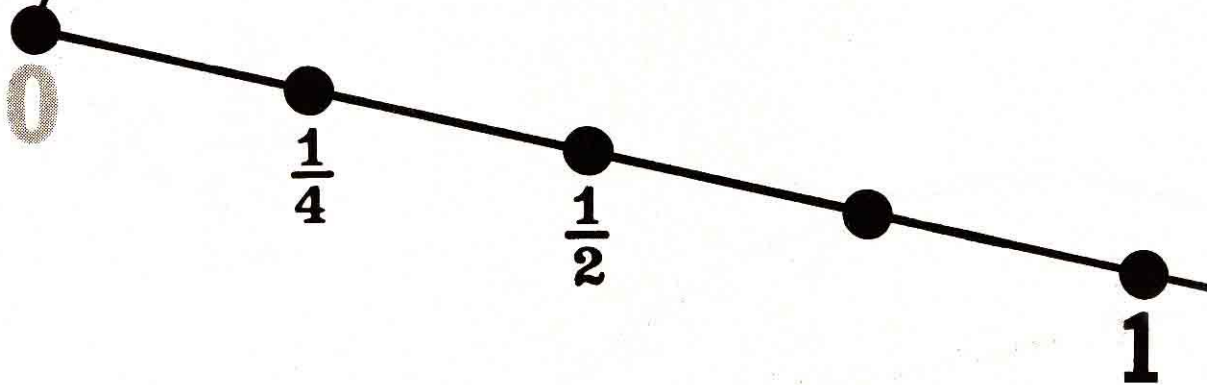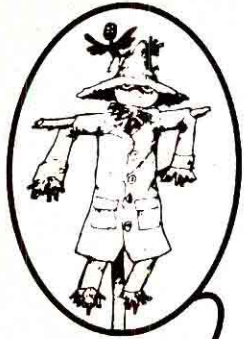
At this point in the story, ½ began to cry again. "It was ¼'s idea; ¼ is smaller than I am and is always playing tricks."

We were impatient to hear about the game. We comforted our little friend as best we could. At last, ½ told us about it.

"4 left the group. Such a large number doesn't like to play with us because we are too small. $\frac{1}{4}$ drew this picture on the ground and suggested that we invite our friend $\frac{3}{4}$. We agreed. Joining us, $\frac{3}{4}$ looked at the picture, seemed very happy, and exclaimed, 'I know where I belong.'"
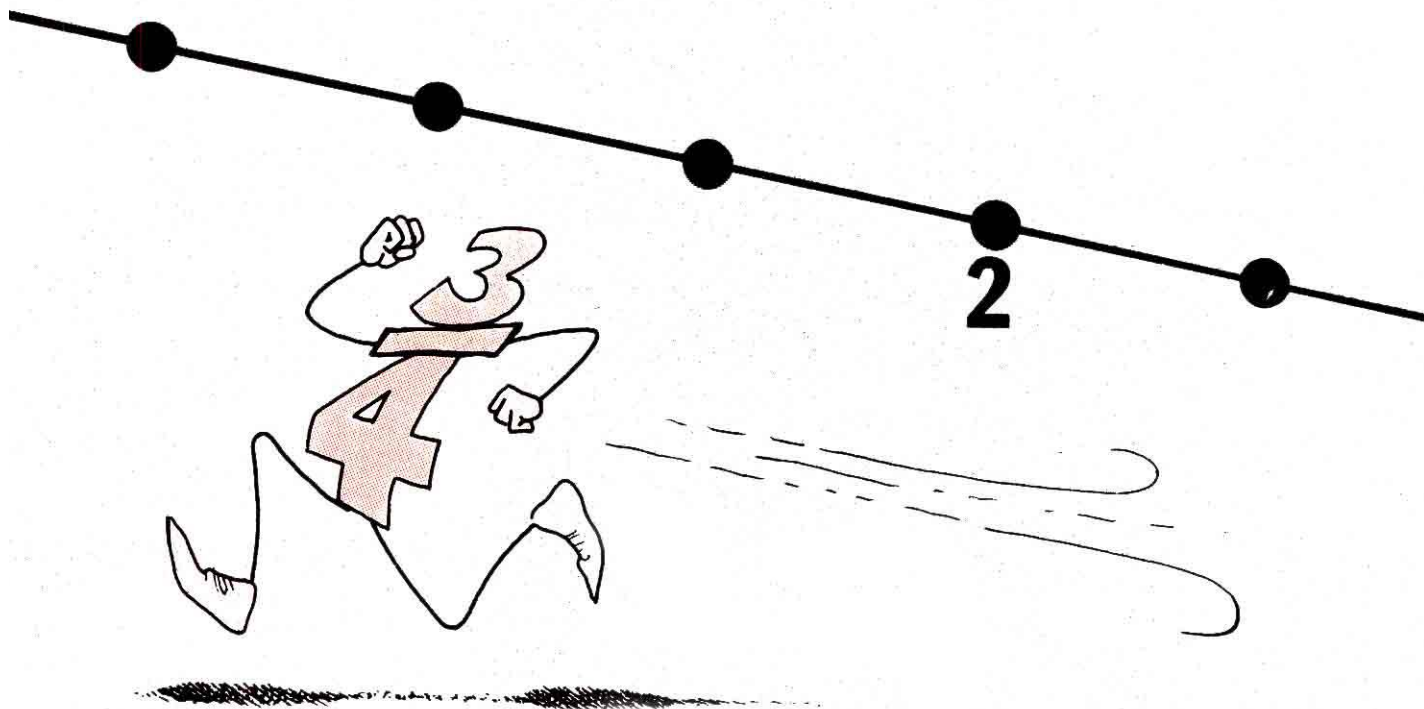
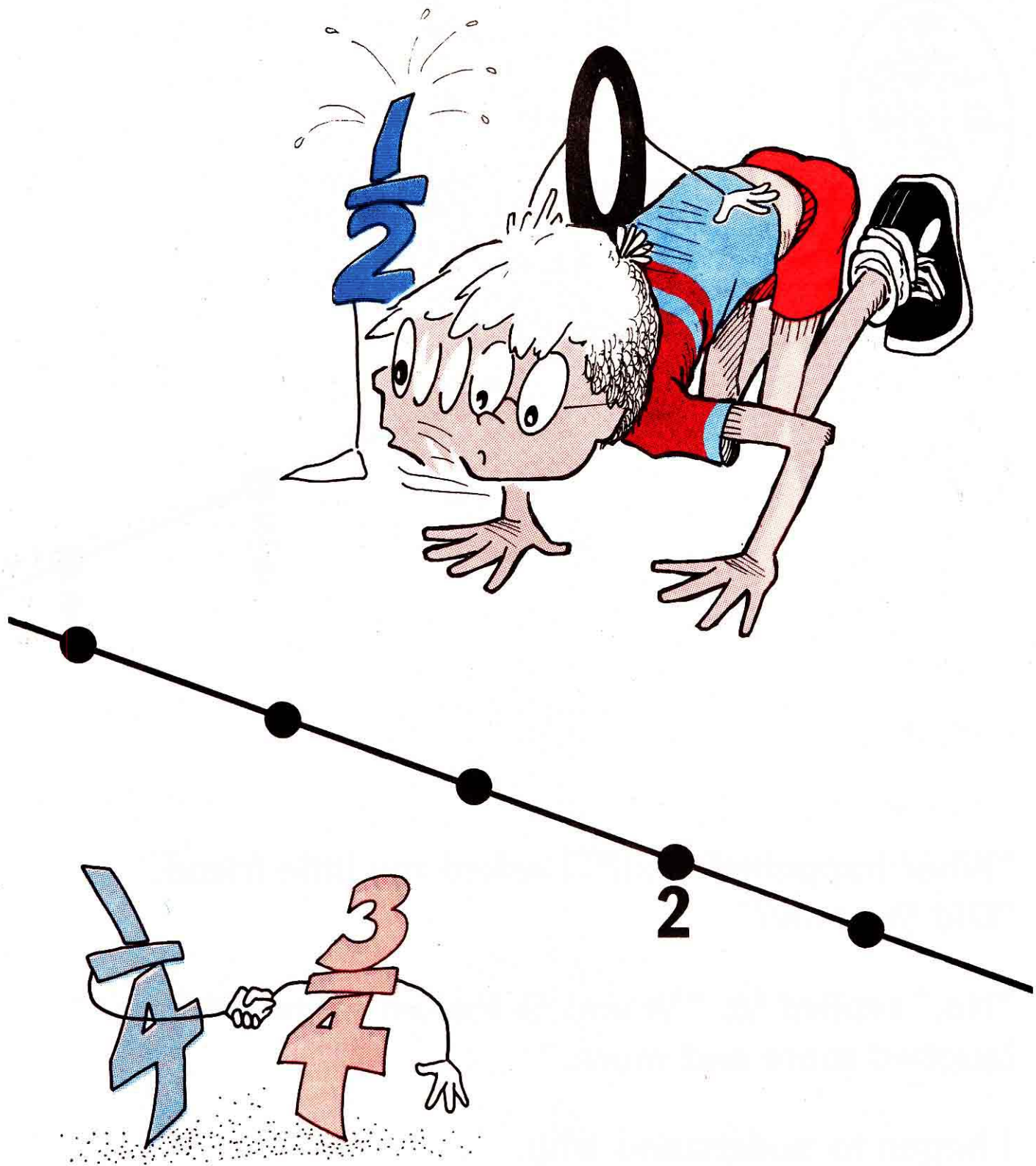**BEFORE TURNING THE PAGE, SHOW WHERE $\frac{3}{4}$ BELONGS.**
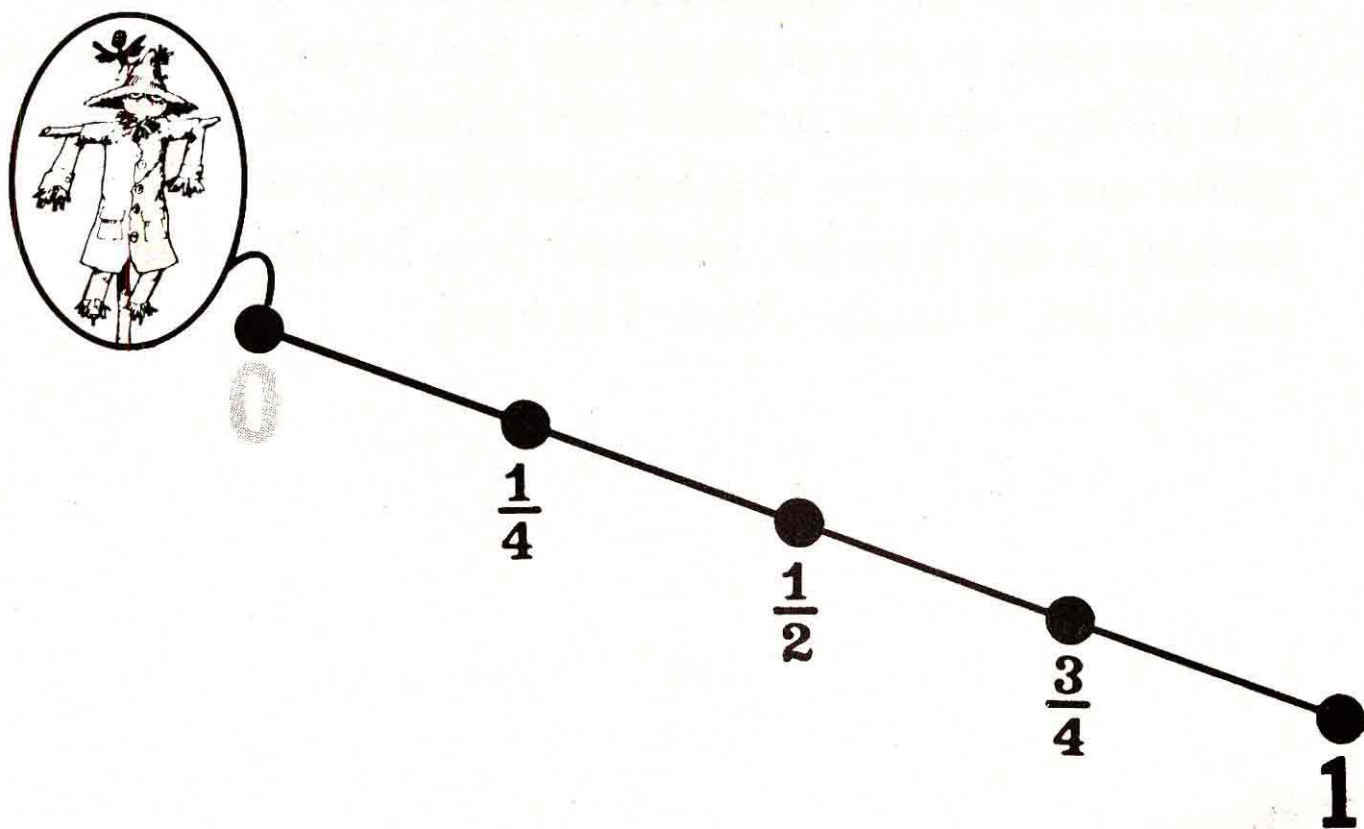
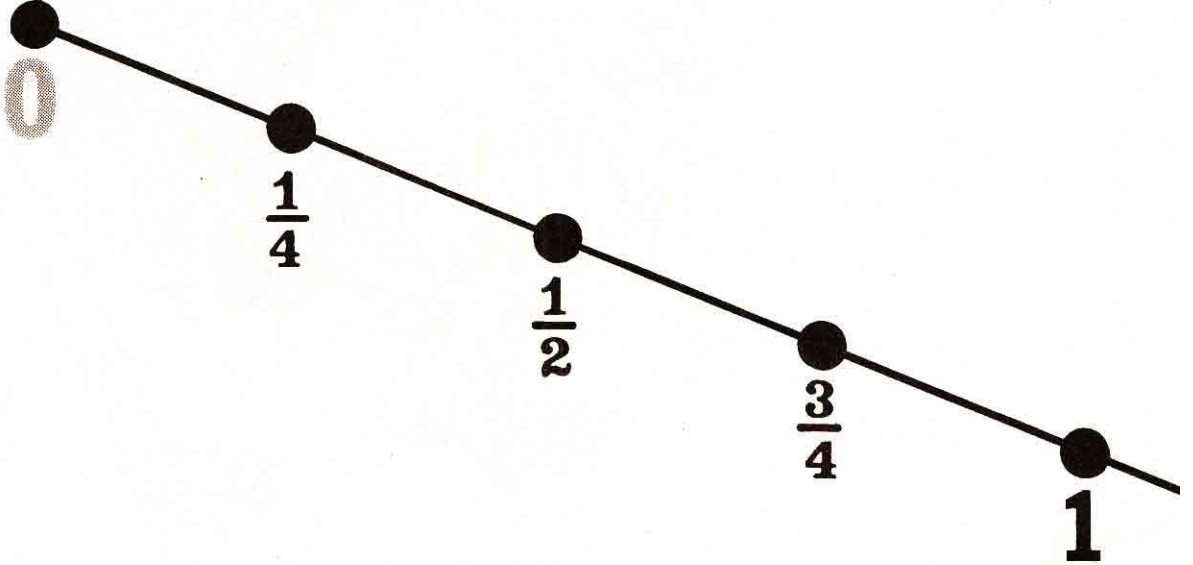"Then ¼ and ¾ looked at each other and laughed," continued our little friend. "They suggested that we invite ²⁄₄. We all agreed."

½ began to cry again.

Looking at the picture, I was a little concerned.

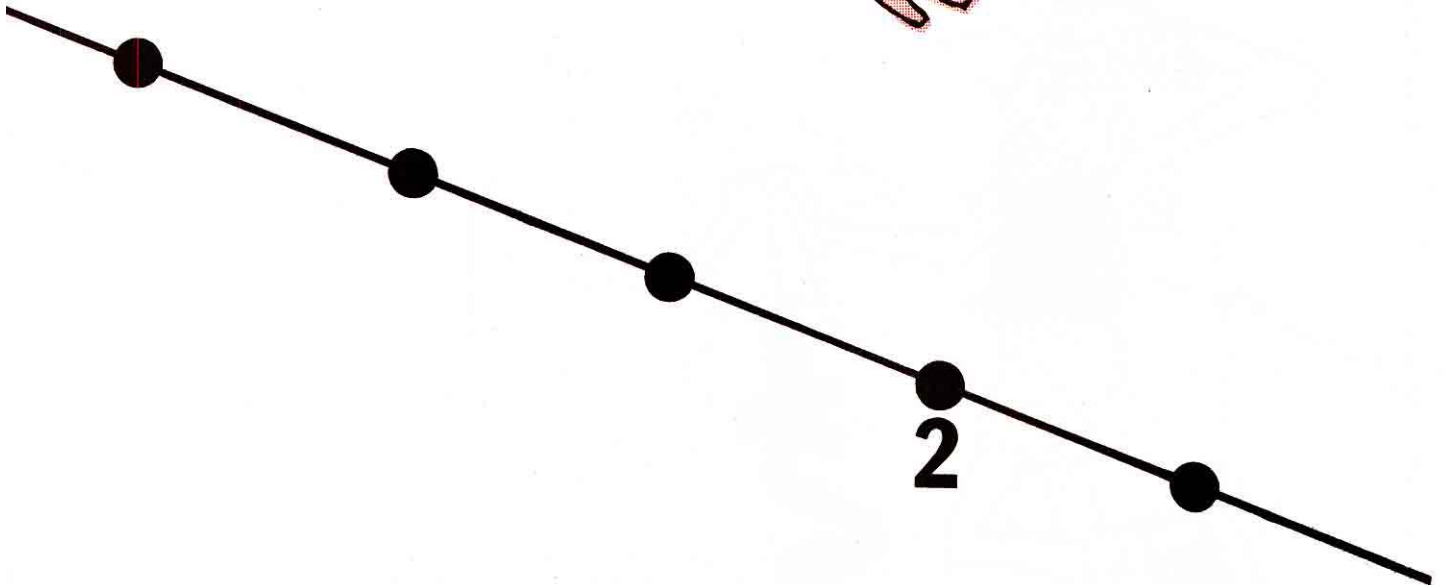"I think it was a good joke," exclaimed 0.

WHAT IS YOUR OPINION?

15
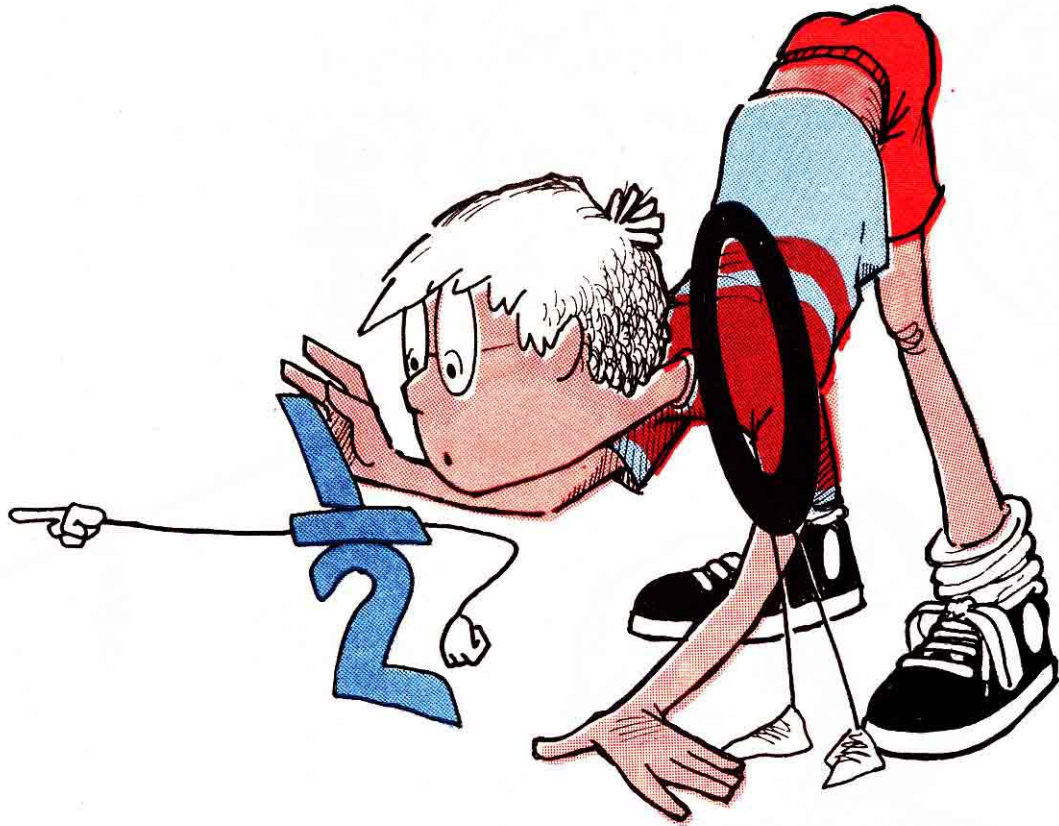
"What happened next?" I asked my little friend. "Did 2/4 come?"

"No," replied 1/2. "1/4 and 3/4 looked at me and laughed more and more."

I began to understand why.

"Looking at their picture, I felt very uneasy," said 1/2, "because I was convinced that the only possible place for 2/4 was halfway between 1/4 and 3/4, and that's where I was."

0    $\frac{1}{4}$ $\frac{2}{4}$ $\frac{1}{2}$ $\frac{3}{4}$ 1
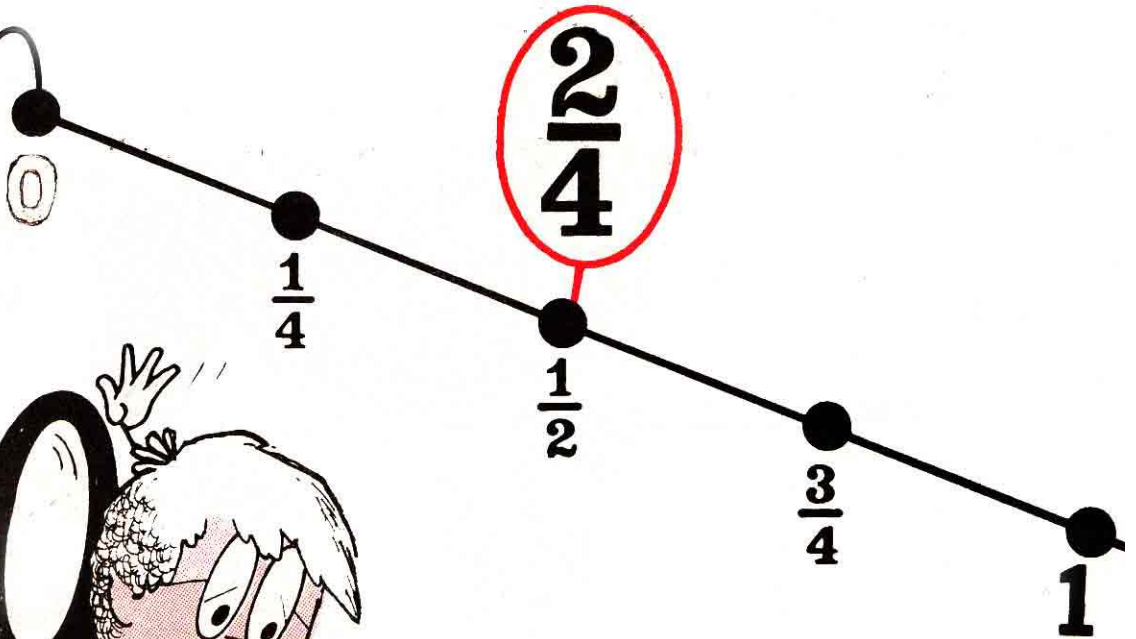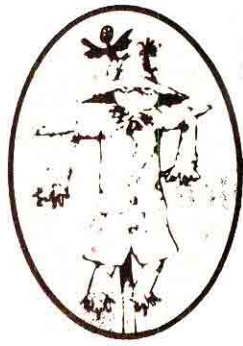
Our little friend continued with the story. "I thought that ²⁄₄ would ask for my place. I would have to fight to keep it. But I don't like to fight because I am so tiny; I always lose."

2
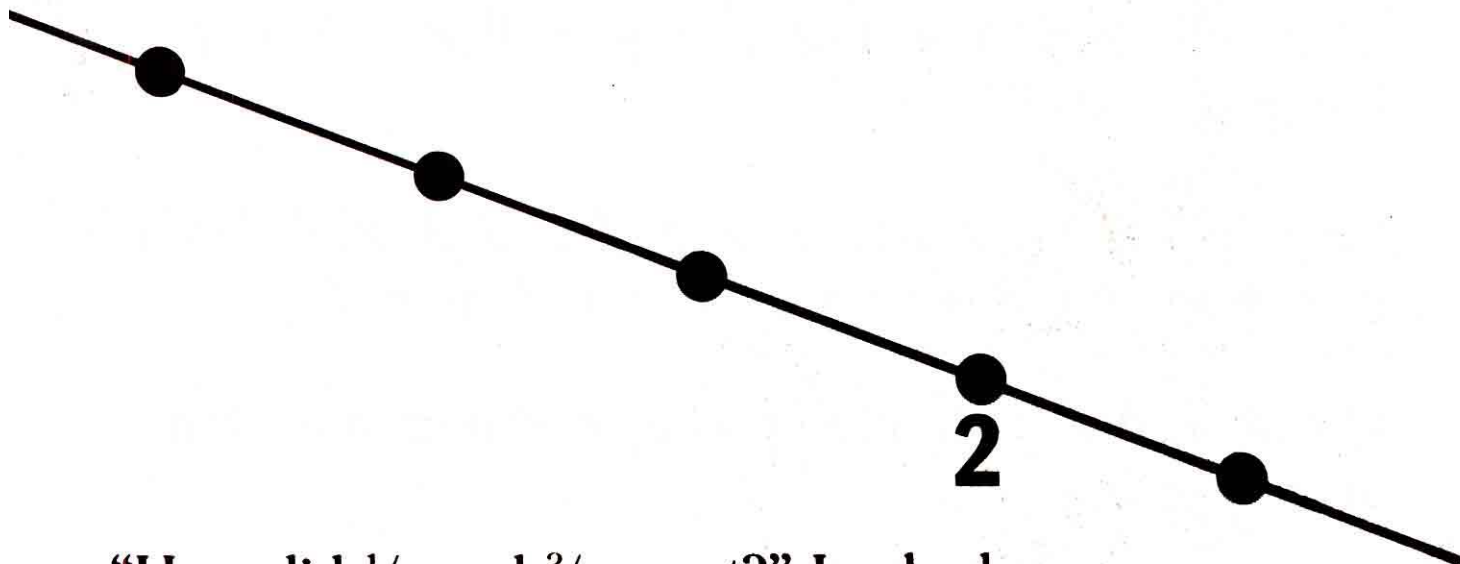
"How did ¹⁄₄ and ³⁄₄ react?" I asked.

"'You silly number,' they said to me, 'don't you understand that ²⁄₄ is just you?'"

"What was your answer?"

"But I am not ²⁄₄; I am ¹⁄₂."

"$1/4$ and $3/4$ are right," said 0 quietly. "$2/4$ is just another name for you. I don't understand why you are so worried."

"I don't want to change my name," cried our little friend. "When I was born, I was called $1/2$ and I like my name."

"But you don't lose your name," explained 0, "you just receive another one, like a nickname."

Our little friend stopped crying and became silent and thoughtful.
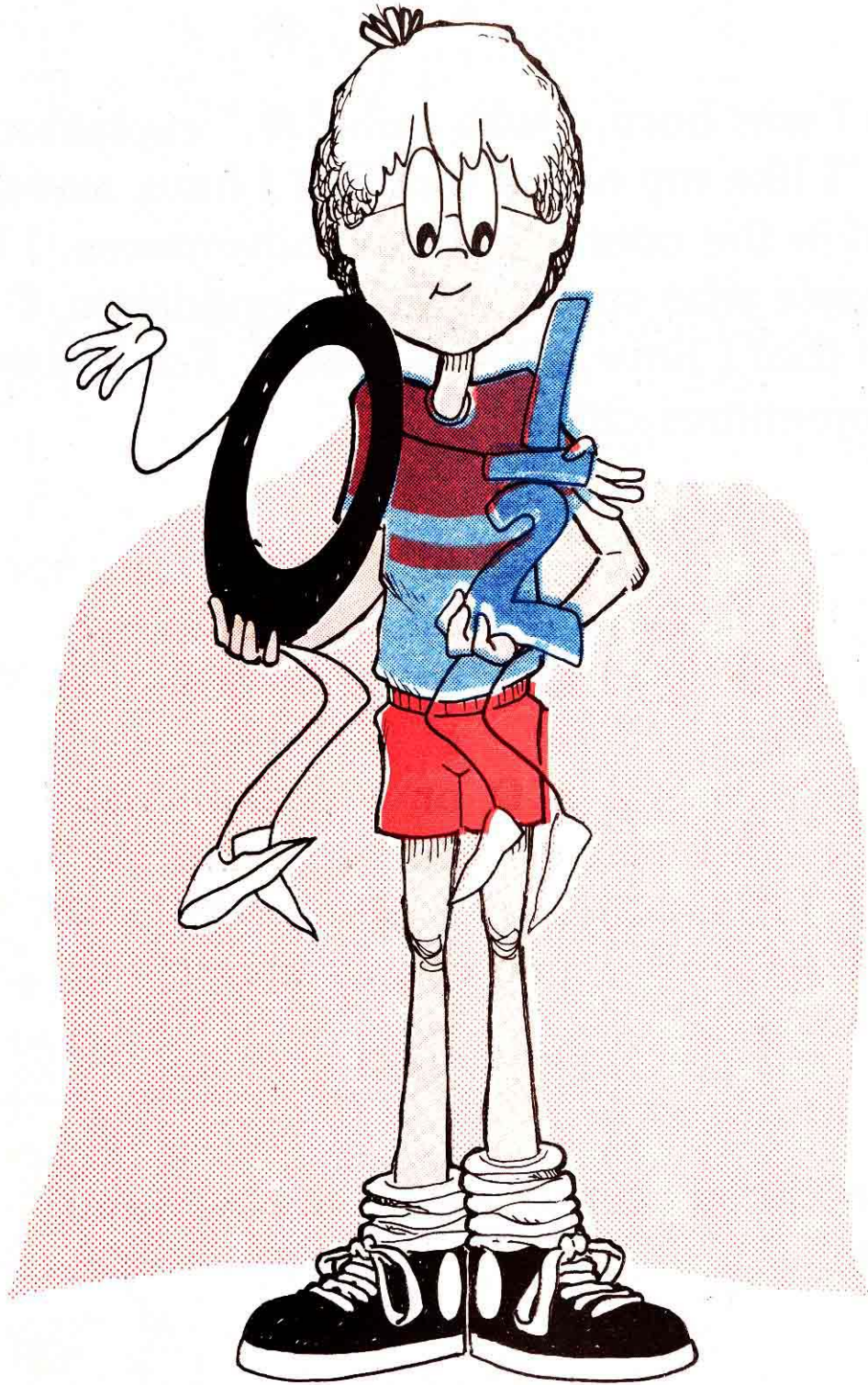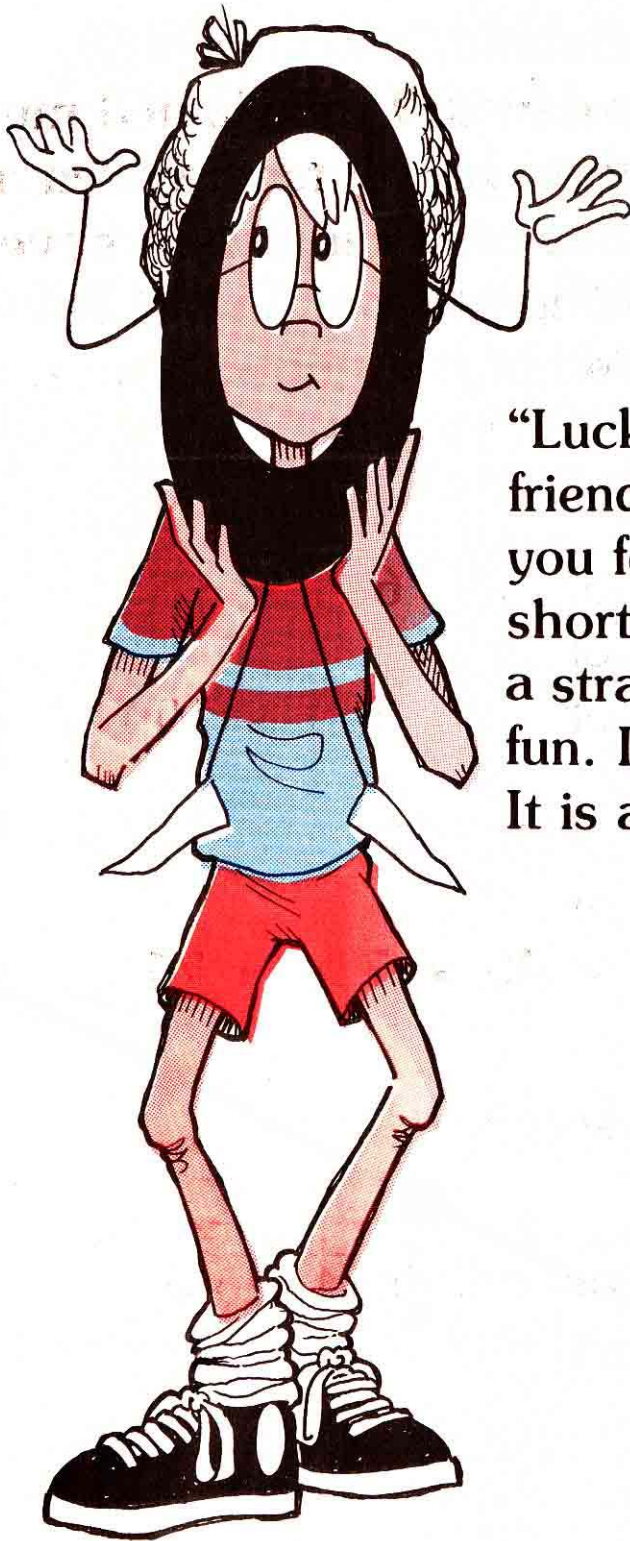
CAN YOU THINK OF OTHER NAMES FOR ½?

"When I was born, I was called **0**," explained my friend. "I like my name too. But I have traveled a lot, and in the course of many adventures, I have met people who speak different languages. I have learned that I have several names. For instance, I am sometimes called

$$2 - 2 \text{ or } 6 - 6$$
$$\text{or}$$
$$1{,}000 - 1{,}000 \text{ or } (2 \times 50) - 100$$
$$\text{or}$$
$$2 \times 0 \text{ or } 0 \times 2$$
$$\text{or}$$
$$175 \times 45 \times 0 \times 46 \times 728 \times 75$$

and so on.

Everyday I discover at least one new name for myself."

"Lucky number," I said to my friend. "Depending upon how you feel, you can choose a short name or a long name or a strange name. It must be fun. I have only three names. It is a little boring."

CAN YOU THINK OF OTHER NAMES FOR 0?

"I am beginning to understand," exclaimed ½. "¼ and ¾ were not as mean as I thought. They played their joke. Still their game taught me something interesting. But my story is not over yet. Now that I am no longer afraid, I shall tell you about the second part of the game."

$$\frac{2}{4}$$

$\frac{1}{2}$

$\frac{1}{4}$

$\frac{1}{8}$

0
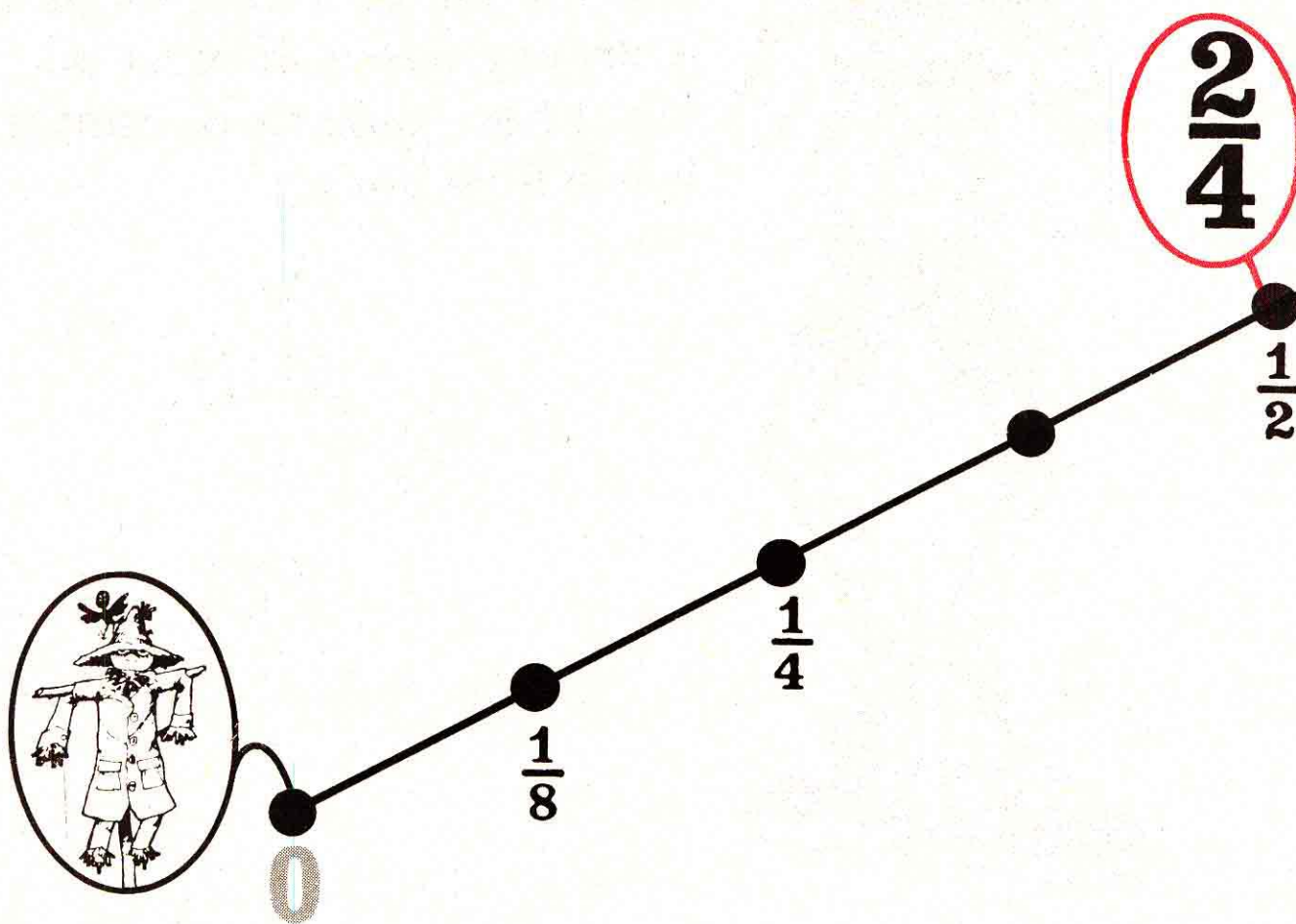
"2 left us to play with larger numbers. $\frac{1}{8}$ came to replace 2 and together we drew this picture on the ground."

$\frac{3}{4}$

1
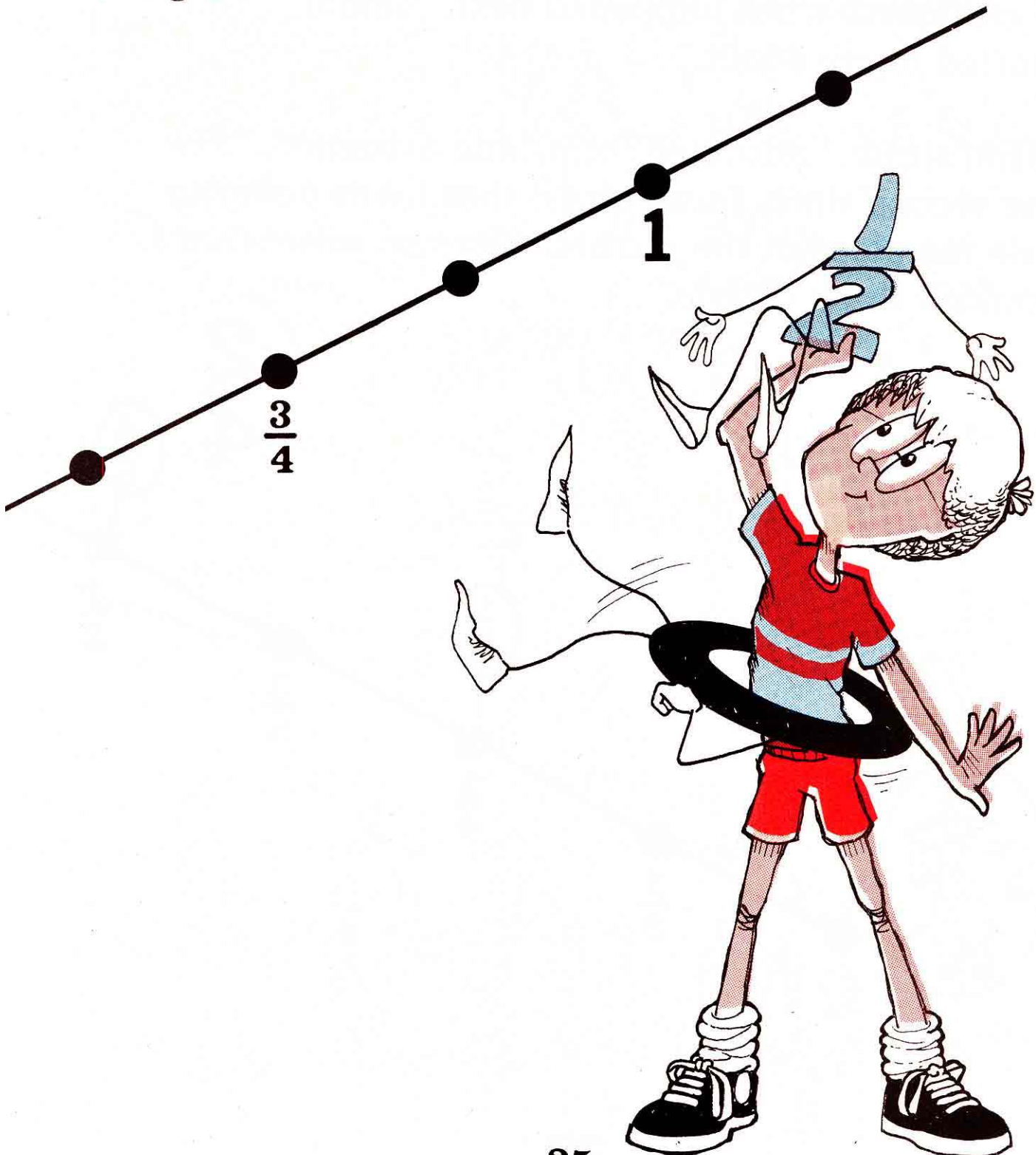
"'Let us invite $\frac{2}{8}$, $\frac{3}{8}$, $\frac{4}{8}$, $\frac{5}{8}$, $\frac{6}{8}$, $\frac{7}{8}$, $\frac{8}{8}$, and $\frac{9}{8}$,' suggested $\frac{1}{8}$. We all agreed."
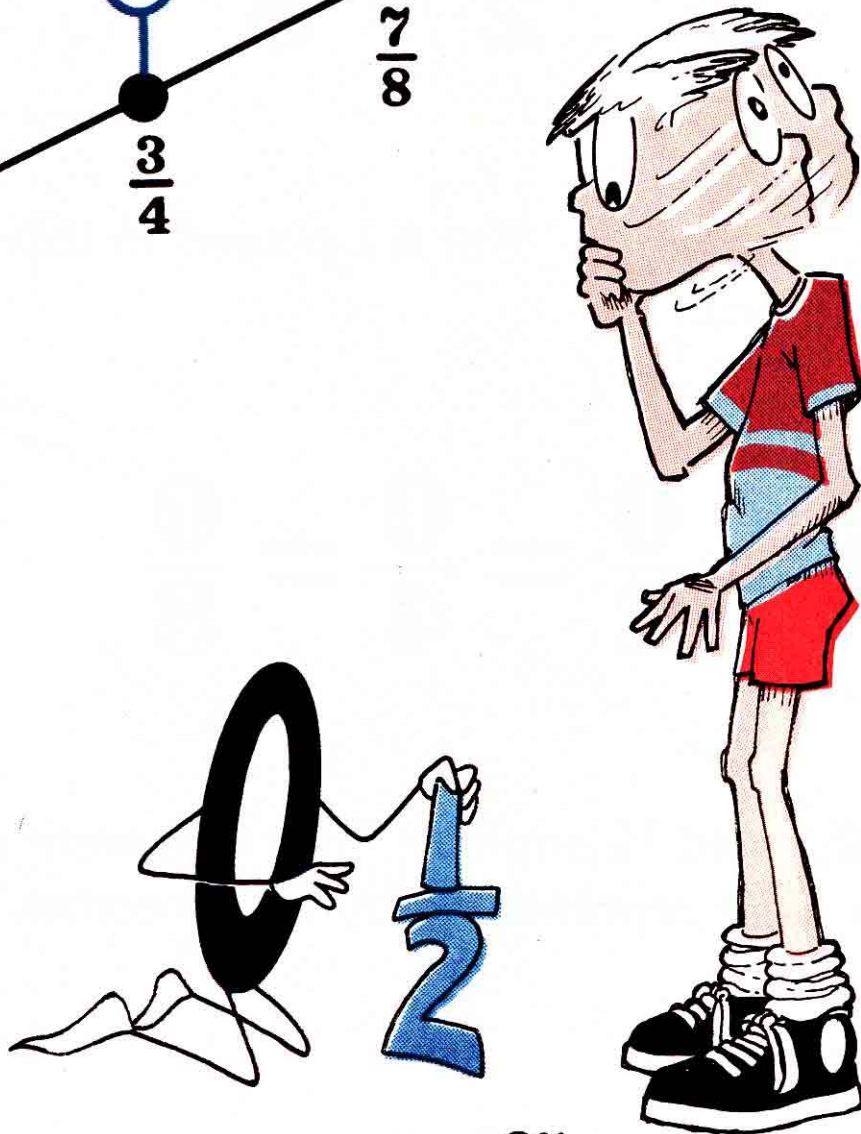
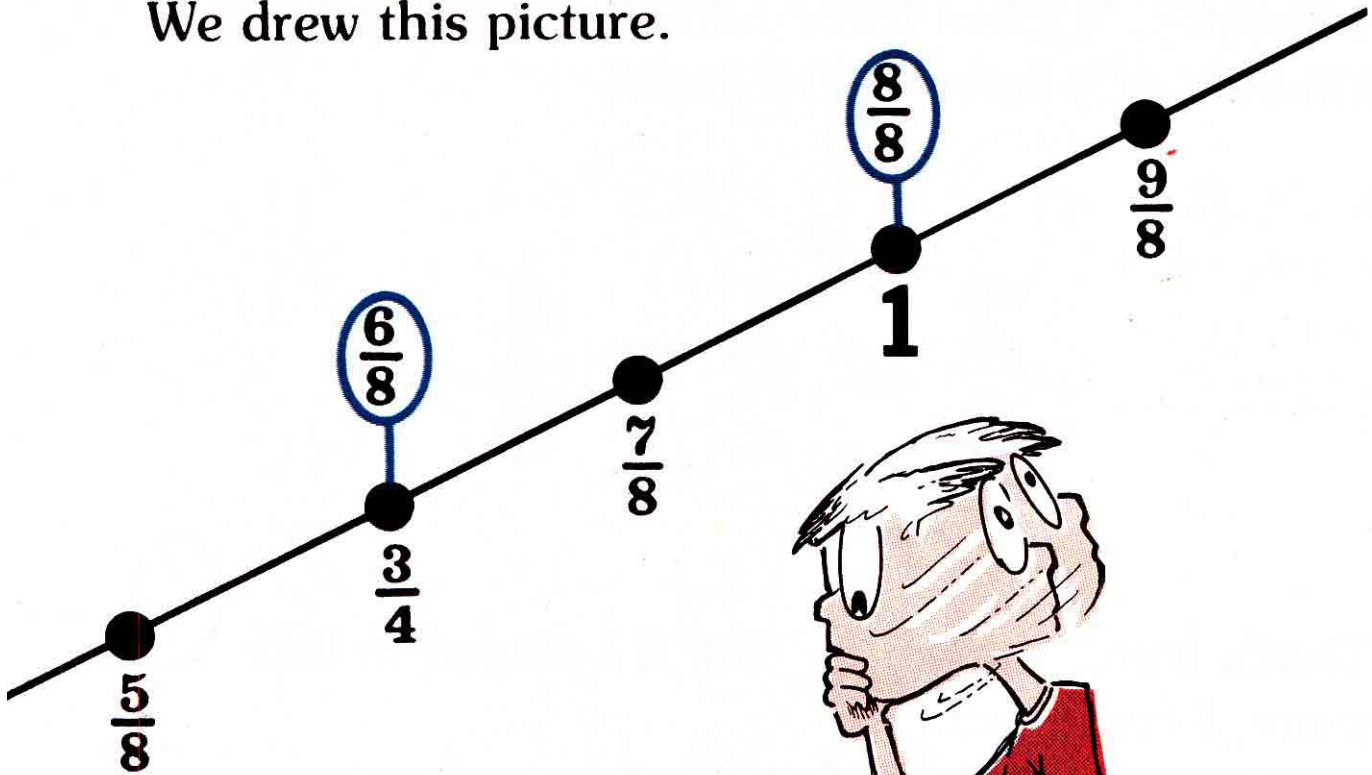"I can guess what happened next," said 0. "You started to cry again."

"That's true," admitted $\frac{1}{2}$, a little ashamed. "For the second time, I was afraid that I was going to lose my place in the picture. I was so upset that I couldn't think clearly."
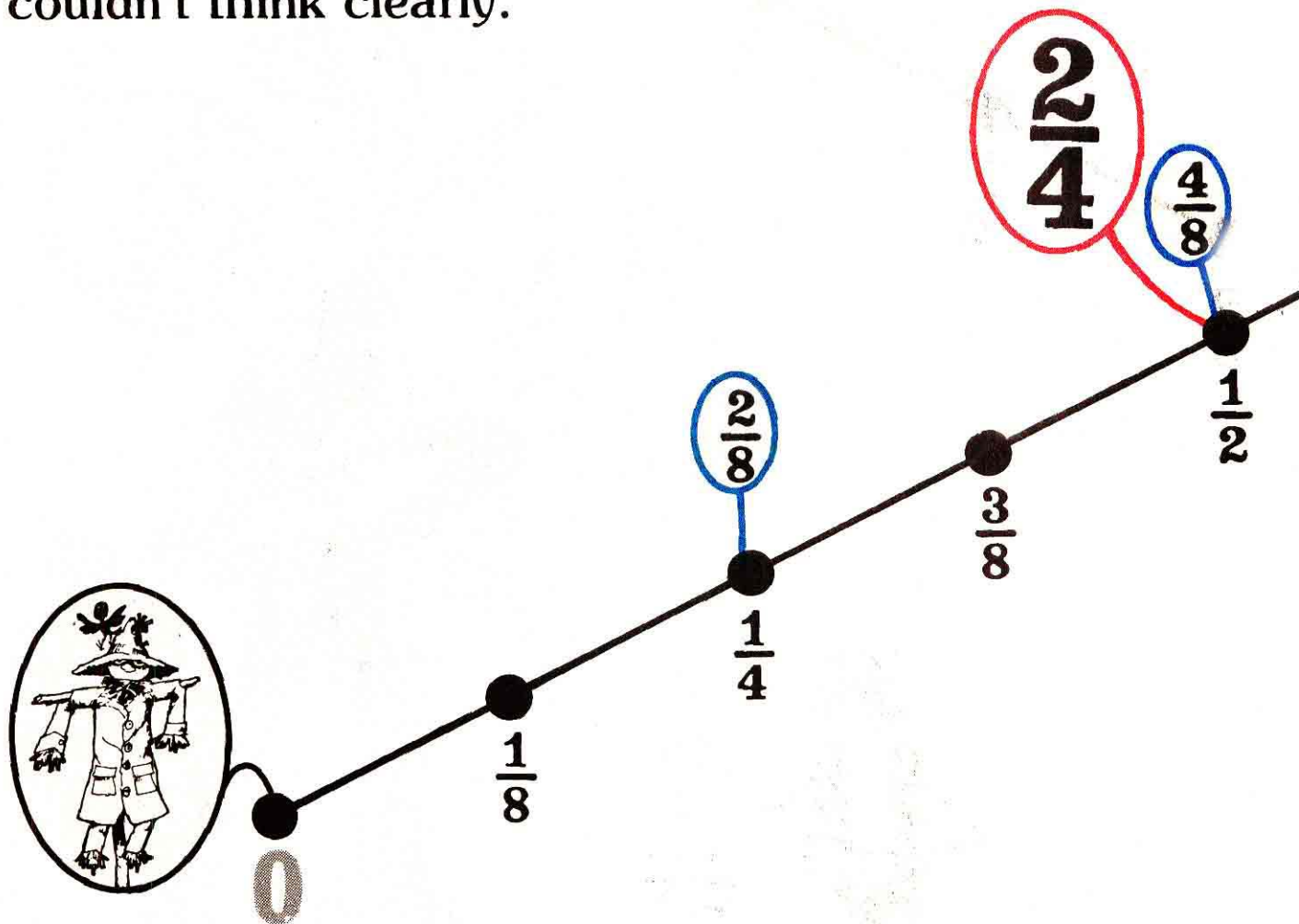
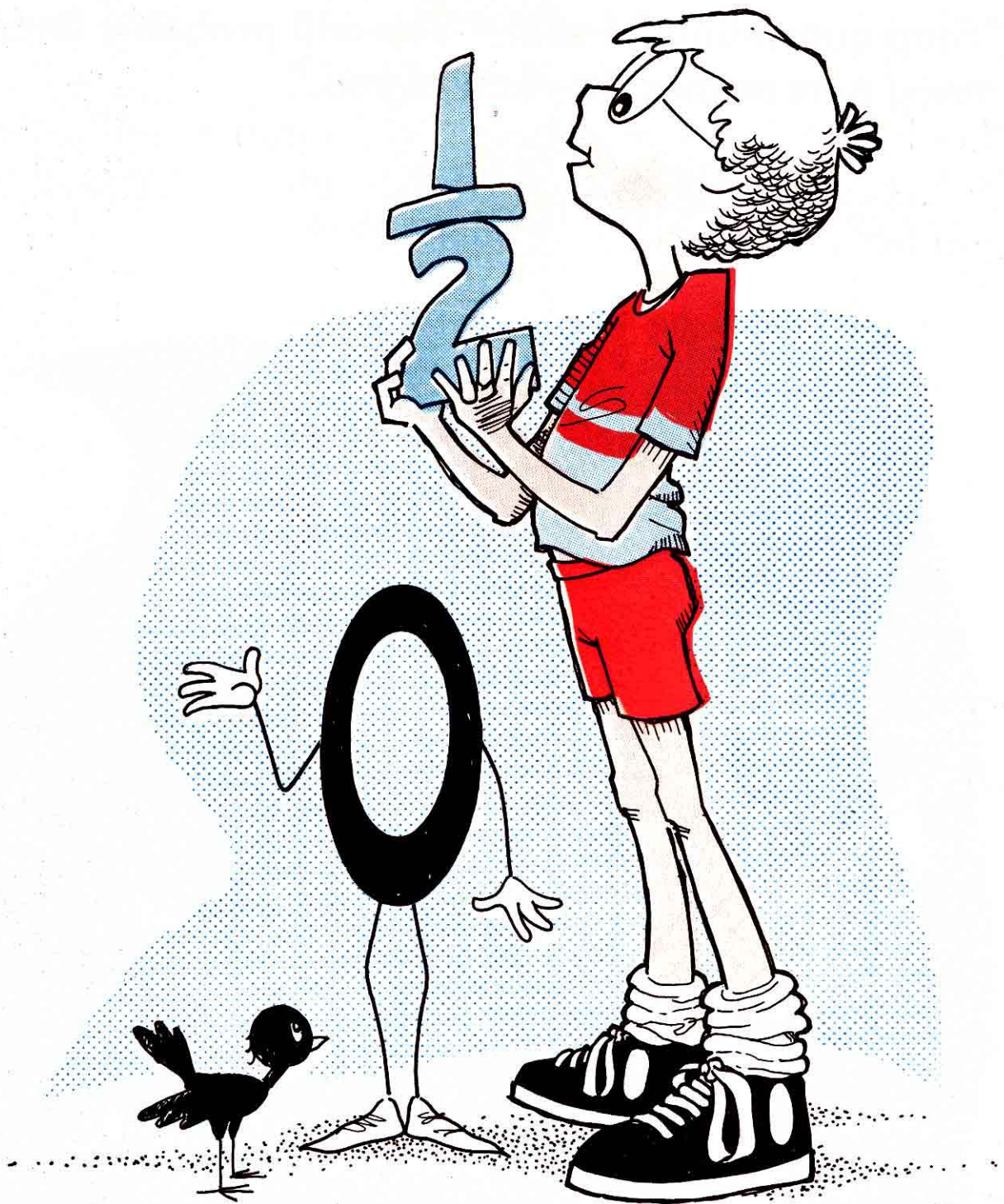"But now it's very clear to me why only $^3/_8$, $^5/_8$, $^7/_8$, and $^9/_8$ arrived."

We drew this picture.

"Look how important I am in this game," shouted ½ happily. "I have three names and the other numbers only have one or two."

$$\frac{2}{4} = \frac{1}{2} = \frac{4}{8}$$

"That's true," agreed 0. "But if I played in this game, I could write:
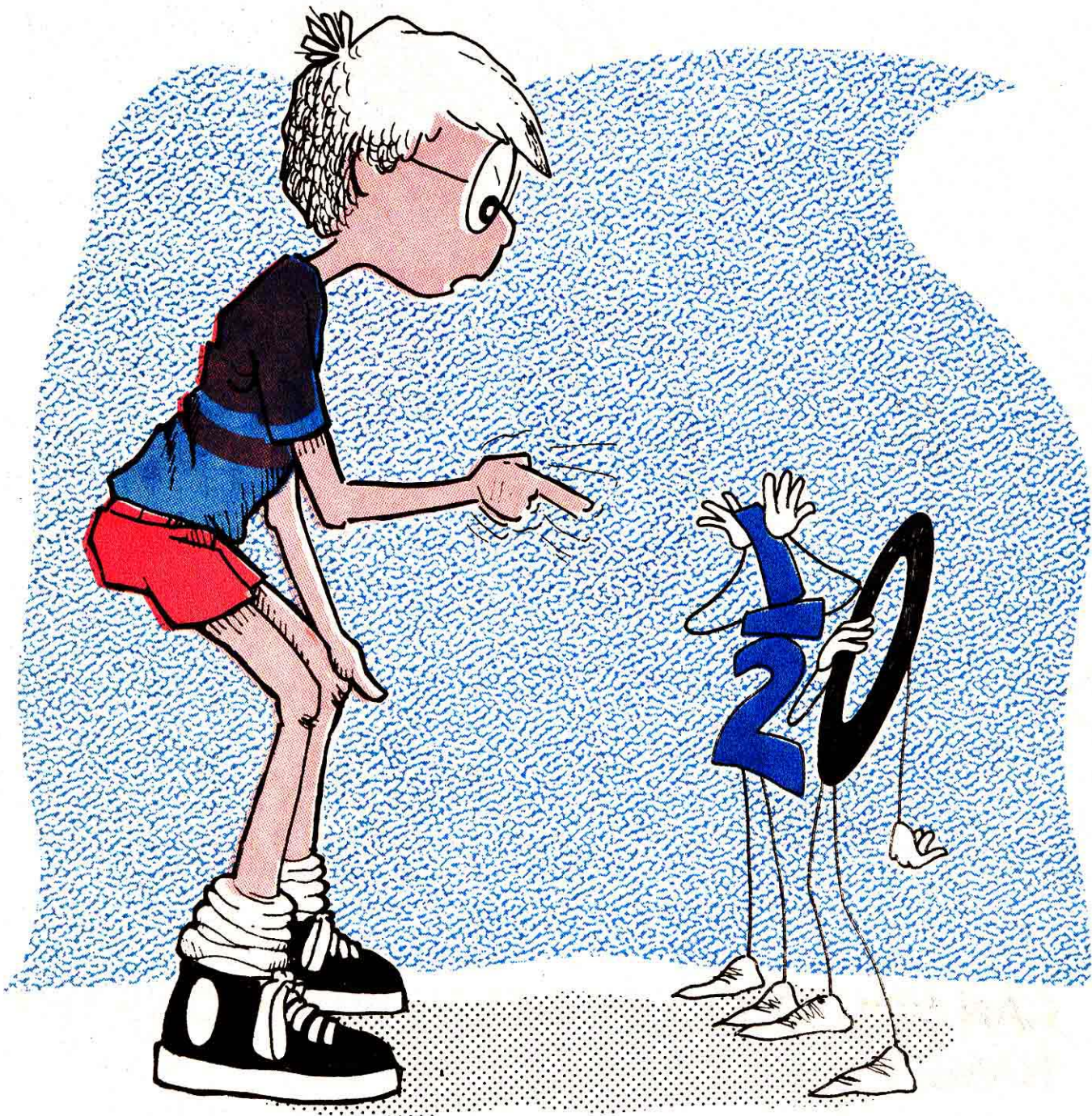
$$0 = \frac{0}{2} = \frac{0}{4} = \frac{0}{8}$$

"That's right," said ½ smiling. "But you were not invited. You were represented by a scarecrow."

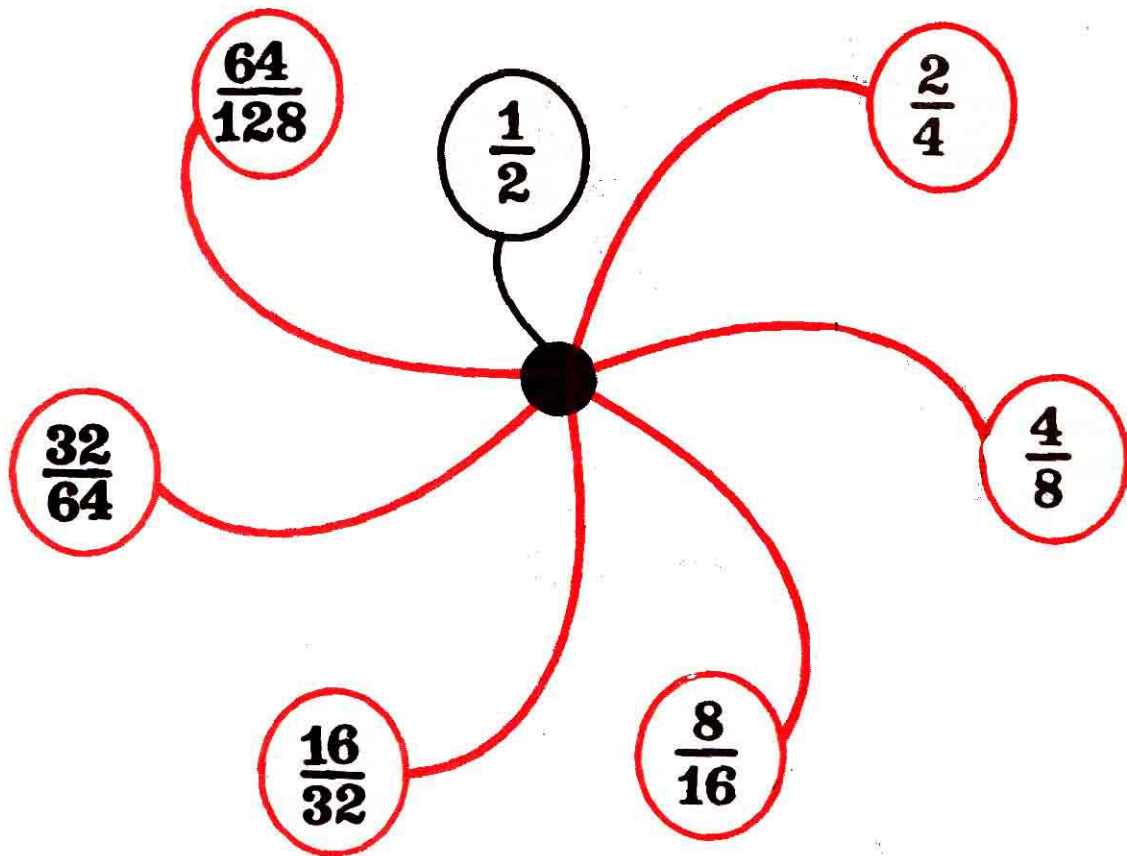CAN YOU THINK OF OTHER FRACTIONS THAT NAME 0 AND ½?

"Stop quarreling," I said. "You will probably find many new names for each of you."

My little friend smiled and drew this picture.

CAN YOU DRAW A SIMILAR PICTURE FOR 0?

In *I AM NOT MY NAME*, ½ weathers a serious identity crisis and 0 has some of its pomposity deflated. Much to 0's annoyance, a small group of numbers have been playing some games in its absence. During the course of these games, ½ suddenly becomes aware of the fact that there is another potential occupant of its place on the number line. In great distress, ½ seeks comfort in the company of a human friend, who is spending an afternoon chatting with 0. By following the ensuing discussion and by answering the questions that arise as this develops, the young reader is introduced to the subject of equivalent fractions in a way that contrasts sharply with usual dry presentation.

Edward Martin

STORIES BY FREDERIQUE

Ages 5 to 8

The Playful Numbers
The Baby Is Born
81 Roses
One Out of Seven
The Old Shoemaker
I Am A Very Happy Boy
The Little Dreamer
Two by Two
The Weird Story of 24
Where's My Nose?
The Happy Puppet
The Magic Box
Summer School in the Old Days

Ages 8 to 12

The Little Donkey
Singing Friends
Dancing Friends
I Am Not My Name
The Living Lines
The Square Trap
Nabu Wins an Award

Ages 10 to 14

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

Comprehensive School Mathematics Program