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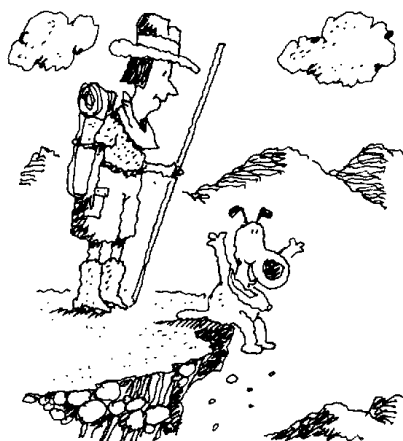
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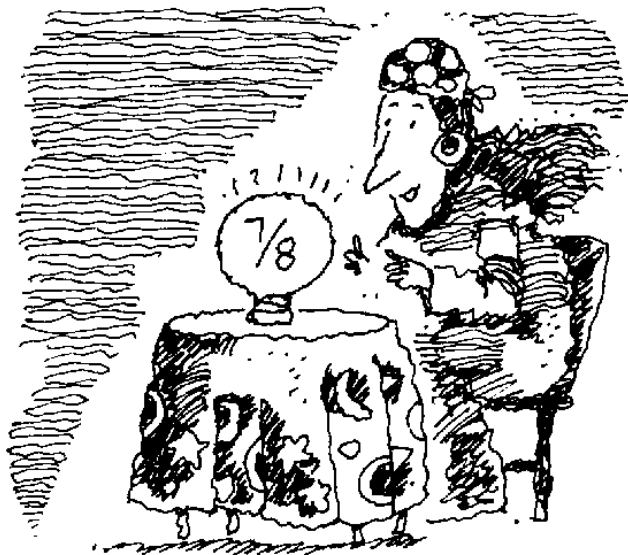
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How To Use This Book



Welcome to *Funny & Fabulous Fraction Stories!*

Fractions are a tricky topic. Neither completely concrete or abstract, they mark the transition in math from the purely representational to the purely symbolic. Because of this, many students find fractions difficult to learn—and many teachers find them difficult to teach.

This book seeks to make fractions more accessible to both students and teachers by introducing an element of fun. The stories, poems, plays, and parodies contained in these pages are designed to entertain your students and at the same time to give them a solid grasp of important fractional concepts. The characters and situations in each activity will also help students apply the concepts they learn to real-life situations—a key element of the

National Council of Teachers of Mathematics' Curriculum Standards.

The stories in this book are intended to appeal to all kinds of learners, including:

- students at all achievement levels
- students working with fractions for the first time
- older students who need review and enrichment
- students who find it difficult to visualize and conceptualize fractions
- students not easily motivated by traditional textbooks
- students who seek a connection between their own lives and mathematical concepts

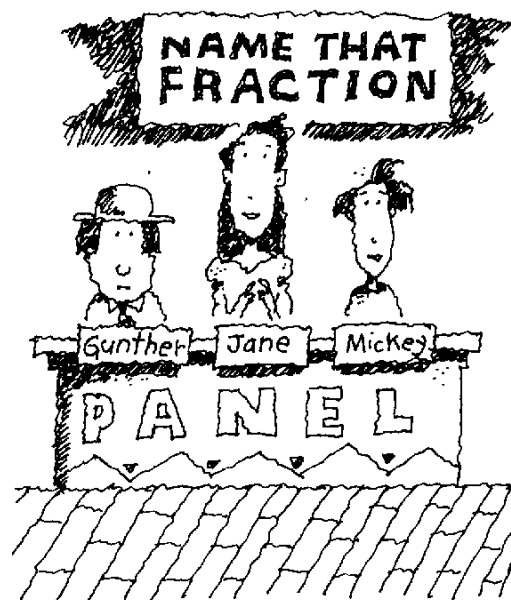
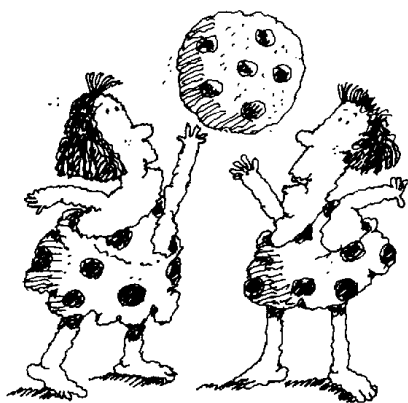
THE BOOK'S COMPONENTS

THE ACTIVITIES

This book is divided into four sections:

- **The Basics**, which covers general fractional concepts, from visualizing fractions to expressing fractions in simplest form
- **Adding and Subtracting Fractions**
- **Multiplying and Dividing Fractions**
- **Using Fractions**, where students apply the fraction skills they have learned to calculate probability, ratios, and decimals.

Sprinkled throughout the book are a series of “One Way to Do It” tip boxes. Each suggests a strategy which students may find helpful in solving the problems in that particular activity. Students should not be limited to that specific solving strategy, however; if they prefer using a method other than the one suggested in the box, by all means encourage them to try it.



To make selecting appropriate activities an easier task, the table of contents lists the primary concepts covered in each activity.

ASSESSMENT

Each of the first three sections concludes with a Skill Workout that reinforces concepts covered in that section. In addition, two tests appear at the end of the book.

- Test No. 1 covers sections 1 and 2, including basic fraction concepts and addition and subtraction of fractions.
- Test No. 2 covers sections 3 and 4, including multiplication and division of fractions, reciprocals, ratios, and conversion of fractions to decimals.

THE SOLUTIONS

Annotated solutions to each of the 27 activities, plus the workouts and tests, are located on pages 82 to 88.

HOW THE ACTIVITIES CAN BE USED

The stories in this book can be used in a variety of ways.

- You can use the activities as a framework from which to approach fractions, or as a supplement to classroom activities.
- You can work through the problems in sequence, or reinforce skills as you see fit.
- Students can work on the stories individually, in teams or groups, or as a class.
- Stories can be assigned to students for independent self-paced study.
- Activities can be read as part of an interdisciplinary program that includes storytelling, fantasy, humor, or literature.

TEACHING TIPS

- The use of manipulatives is an excellent way to reinforce the skills presented in this book. For even more enrichment, have students brainstorm other real-life applications of the fraction concepts presented in each activity.
- Encourage students to explore different problem-solving methods when working on an activity. In addition, remind them that the best way to be sure they've done a problem correctly is to check their work.

- Many students find word problems like the ones in this book challenging. Make sure students carefully read the problems and are able to state the question being asked before they attempt to solve them.
- Present the activities in unique ways. If a story is written in dialogue form, for example, assign roles to students and have them read it aloud.
- Once students have shown an understanding of fractional concepts, allow them to use calculators to solve some of the more challenging word problems presented in the book.

I hope this book helps you to motivate your students to a greater understanding of fraction concepts. I know they'll have a great time learning them!

—DAN GREENBERG



Name _____

Martha Crunch, Personal Fractions Trainer

Hi. I'm Martha Crunch, your personal fractions trainer. And this is Steve. Say hello, Steve.

RA-A-AH! EE-E-URK!

Welcome to fractions, the Martha Crunch way.

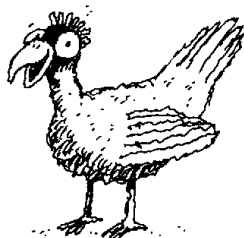
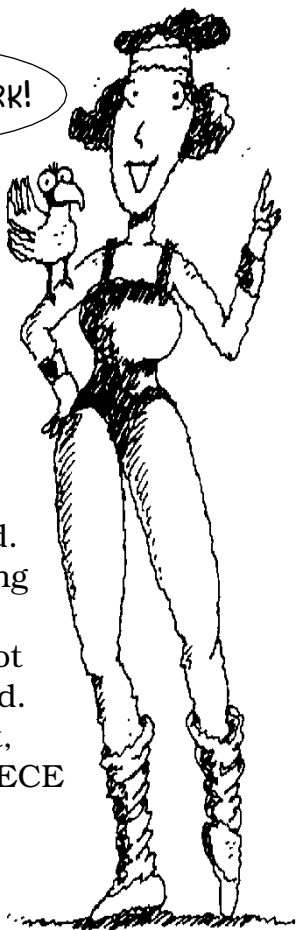
You know what really gets me? People who think fractions are hard. Doing 250 jumping jacks on a gravel driveway—barefoot ... now that's hard. Compared to that, fractions are a **PIECE OF CAKE**.

So what do you say? Are you ready to learn fractions...

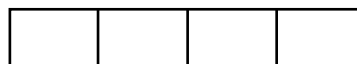
...the Martha Crunch way?

RA-A-AH! EE-E-URK!
WHEN DO WE START?

Right now, Steve.

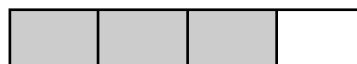


HERE'S A PRACTICE PROBLEM
TO GET YOU GOING.



If you color in 3 of the boxes in the bar above, what fraction of the whole bar is colored in?

First color in 3 boxes. Like this:



To find out what fraction of the bar is colored in:

1. On the top, write the **NUMBER OF BOXES YOU COLORED IN.**

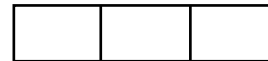
→ $\frac{3}{\quad}$

2. Write the **TOTAL NUMBER OF BOXES on the bottom.**

→ $\frac{3}{4}$

$\frac{3}{4}$ of the bar is colored in!

1. Color 2 squares. What fraction is colored?

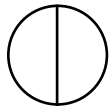


Write:

$\frac{\quad}{\quad}$ ← Number of colored squares

$\frac{\quad}{\quad}$ ← Total number of squares

2. Color 1 section of the circle. What fraction is colored?

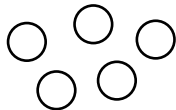


Write:

 ← Number of colored sections

 ← Total number of sections

3. Color 3 circles. What fraction is colored?

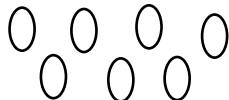


Write:

 ← Number of colored circles

 ← Total number of circles

4. Color 3 ovals. What fraction is colored?



Write:

 ← Number of colored ovals

 ← Total number of ovals

5. Color 4 x's. What fraction is colored?

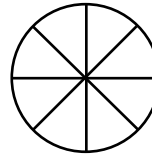


Write:

 ← Number of colored x's

 ← Total number of x's

6. Color 1 slice. What fraction is colored?

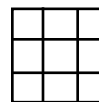


Write:

 ← Number of colored slices

 ← Total number of slices

7. Color 5 squares. What fraction is colored?



 ← What number goes here?

 ← What number goes here?

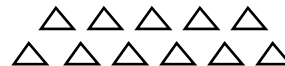
8. Color 7 donuts. What fraction is colored?



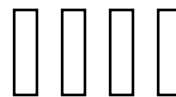
 ← What number goes here?

 ← What number goes here?

9. Color 6 triangles. What fraction is colored?



10. Color 4 bars. What fraction is colored?



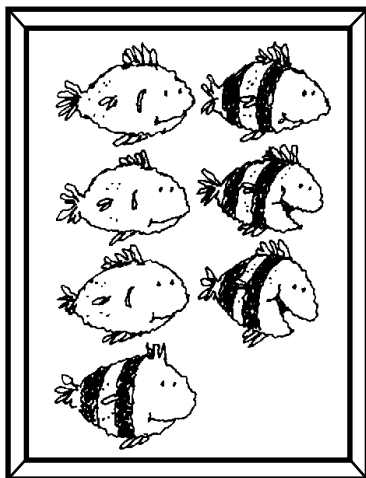
Name _____

Great Artists of the World

Draw Fractions

Five of the world's great artists have volunteered to explain how their most famous work relates to fractions.

Pablo Pescado:



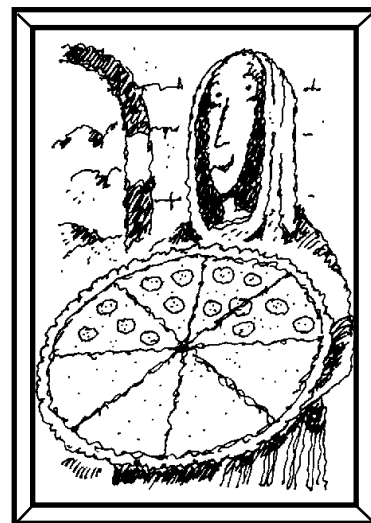
Fishes, Fishes
by Pablo Pescado

I paint fishes. Only fishes. Always fishes. People ask me, "Pablo, why fishes?" I say to them: Why not fishes? No one has ever been able to give me a reason why not. Can you?

1. What fraction of fishes is plain? _____
2. What fraction is striped? _____
3. What fraction has open mouths? _____
4. What fraction has their mouths closed? _____

Leonardo da Pepperoni:

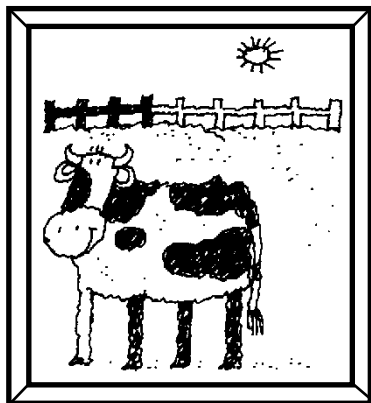
Look into the eyes of the young woman. They tell a story. It is a love story. It is a story of a woman and a pizza. She loves the pizza because it has extra cheese. I hate to brag. But to me, this is the most beautiful painting in the world.



Mona Lisa with a Pizza
by Leonardo da Pepperoni

5. What fraction of the pizza has only cheese? _____
6. What fraction of the pizza has pepperoni? _____
7. Five slices represent what fraction of the pizza? _____
8. Eight slices represent what fraction of the pizza? _____

Georgia O'Fourth:



The Sky, a Cow, a Fence
by Georgia O'Fourth

In the desert where I live, one often comes across a scene like this. The sky is bright. The cow is lonely. The fence is angry. How can you tell? It is picketing.

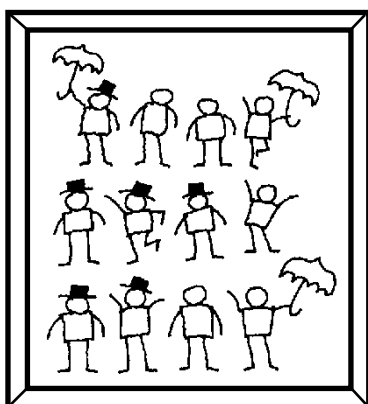
9. What fraction of the cow's legs is colored? _____

10. What fraction of the cow's legs is white? _____

11. What fraction of the fence is colored? _____

12. What fraction of the fence is white? _____

Salvadore Golly:



Little Men Holding Umbrellas Falling Out of the Sky
by Salvadore Golly

This painting was inspired by a real experience I had. It started raining hard. First it rained cats and dogs. Then it rained shoes and socks. Finally, it rained little men. Some of them were wearing hats, and some were holding umbrellas.

13. What fraction of the little men are holding umbrellas? _____

14. What fraction of the men are not holding umbrellas? _____

15. What fraction of the little men are wearing hats? _____

16. What fraction of the men are not wearing hats? _____

Diane Rhombus:

This is a picture of a girl with a bad haircut making lemonade. I call it *Girl With a Bad Haircut Making Lemonade*. I tasted some of the lemonade after I finished the picture. It was delicious. P.S. The girl better get a new haircut.



Girl With a Bad Haircut Making Lemonade by Diane Rhombus

17. What fraction of the pitcher is full? _____

18. What fraction of the pitcher is empty? _____

19. What fraction of the glass is full? _____

20. What fraction of the glass is empty? _____

MORE: Draw your own artwork. When you're done, label all the fractions you can find on it.