

Solving Math Problems

A Reference For Teachers

Middle School, High School, and College



$\leftarrow x \rightarrow$



$$\frac{1}{x} = \frac{x-1}{1}$$

$$x^2 - x - 1 = 0$$

$$x = \underline{1.618 \dots}$$

$$\frac{1}{1} \quad \frac{2}{1} \quad \frac{3}{2} \quad \frac{5}{3} \quad \frac{8}{5} \dots$$

$$\dots \frac{34}{21} \quad \frac{55}{34} \dots$$

$$\dots \underline{1.618 \dots}$$

John R. Dixon

Solving Math Problems

For Math Educators - Middle School, High School, and College

- Over 200 solved problems are ready for classroom use.
- Solutions explain each problem solving process clearly and completely.
- Problems are organized into six classes for convenient selection by teachers.
- Appendices on units, graphs, 'per' problems, and triangles.
- Easier problems are included for teaching the problem solving processes thoroughly before advancing to the more difficult problems.
- 'Word' problems of all types are solved by a single, generalized analysis process.
- Use the book as teacher's personal reference, as a library reference for students, as a text or reference for units on problem solving, or as the basis for workshops. Check the website shown at the bottom right for author availability.

Graduate student of math education: *"A phenomenal book. Very thorough and logical."*

Math teacher: *"A new and interesting perspective on problem solving. I can make good use of it."*

Undergraduate math student: *"Extremely helpful, all of it, especially the 'word' problems."*

On the Front Cover

The puppy, Gwyneth, illustrates two ways to derive the Golden Ratio. Now here's Gwynie all grown up.



ISBN 0-9645272-5-1

About the Author

John R. Dixon, Ph.D., is a retired engineering professor and high school algebra teacher. He has received two outstanding educator awards, served at National Science Foundation, and has written both technical and fiction books. For more on this author, see Preface P-6 or visit his website;



JohnRDixonBooks.com