

# Chapter One

## Reasoning and Resources: Tools for Life

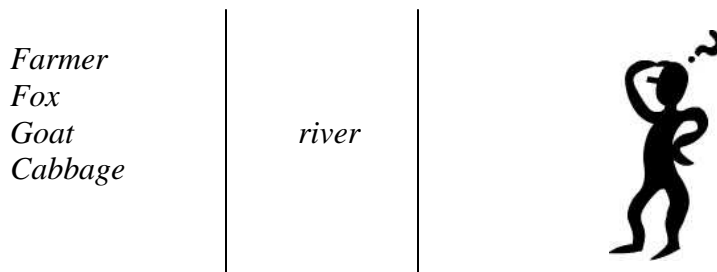
### 1.0 Introduction and Objectives

The thumbnail sketches below represent selected topics in this chapter that you will encounter on your adventure—*an adventure that can last a lifetime!*

#### 1.1 Analytical Reasoning: A Tool for Life

$$\begin{array}{c} 1 \\ 1 \ 1 \\ 1 \ 2 \ 1 \\ 1 \ 3 \ 3 \ 1 \\ 1 \ 4 \ 6 \ 4 \ 1 \end{array}$$

#### 1.2 Math Classics and Applied Reasoning



#### 1.3 Resources for the Present and the Future

**MathForum**

**NCTM**

**MAA**

**MERLOT**

***Math Is Everywhere! Explore and Discover It!***  
***1.0 Introduction and Objectives***

*Learning Objectives for Chapter 1*

1. To enable students to identify and apply various problem-solving strategies.
2. To enable students to develop their analytical reasoning skills through solving problems and puzzles.
3. To enable students to develop their deductive and inductive reasoning skills in recognizing patterns of various types.
4. To promote the use of critical thinking skills through the use of puzzles and mathematical challenges.
5. To enable students to gain familiarity with Web-based mathematical resources.
6. To engage students in active learning through the use of projects and activities.
7. To alleviate student math anxiety through expositional encouragement.
8. To enable students to develop confidence in their mathematical abilities.