


INTRODUCTION

Dear Teacher,

Welcome to *AfterMaths*[™]. These reproducible books are designed to engage students in using a variety of maths skills that will be important to them as developmental learners and as thinkers in the years ahead. Students will use critical thinking, problem solving, and computation skills as they complete the activities.

The activities in the *AfterMaths* student book are based on seven concepts. These concepts are numeration, number theory, measurement, geometry, prealgebra, data interpretation, and logical reasoning. A list of activities and the skills covered appears on the following page.

These books may be used to supplement and reinforce classroom lessons. They may be used to extend or enrich daily lessons. Or, they may be used to provide challenges to students who enjoy experimenting with maths. The activities are designed for students to work on their own, in pairs, or in small groups at their own pace.

The activities provide a variety of experiences for students, including writing, computing, experimenting, completing small projects, conducting research, and playing games. An icon  marks challenging creative-thinking items. Students will become aware that mathematics is not just reserved for the classroom; it is a vital part of the world around them.

Try to preview all the activities in the student book before assigning particular activities. The activities can be done in any order that fits your needs. Note that some maths experiments require the use of basic hands-on materials such as calculators, number cubes, playing cards, dominoes, and rulers.

***AfterMaths, Book D* is designed specifically for students in grade four.** However, the activities can be used with advanced mathematics students in grade three, as well as with students who require mathematics skills reinforcement in grade five.

Enjoy the activities. Encourage students to do as many as possible. Galileo once said that mathematics is the alphabet in which the universe was created. So, let's begin to learn that alphabet.

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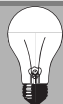
NAME THAT DIGIT!

Missing Digit

Play this game with a partner. Try it three times to see if you can always figure out the missing digit. Fill in the chart as you go.

STEPS	First Try	Second Try	Third Try
1. Have your partner write a four-digit number. Make sure you don't look at it.			
2. Ask your partner to add the four digits together and write down the sum.			
3. Have your partner subtract the sum in step 2 from the number in step 1.			
4. Ask your partner to circle one digit (not a 0) in the number. This will be the 'missing digit.' Say that you will soon be able to identify this missing digit.			
5. Have your partner slowly read the digits that have not been circled.			
6. Add the digits that your partner reads. If they equal a two-digit number, add those two digits together to get a one-digit number.			
7. If the digits equal a number from 1 to 8, subtract the number from 9. This will be the missing digit. If the digits add up to 9, then the missing digit is 9.			

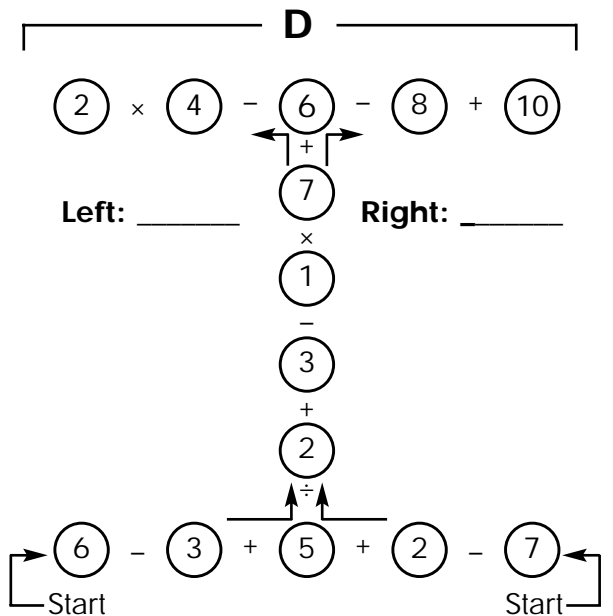
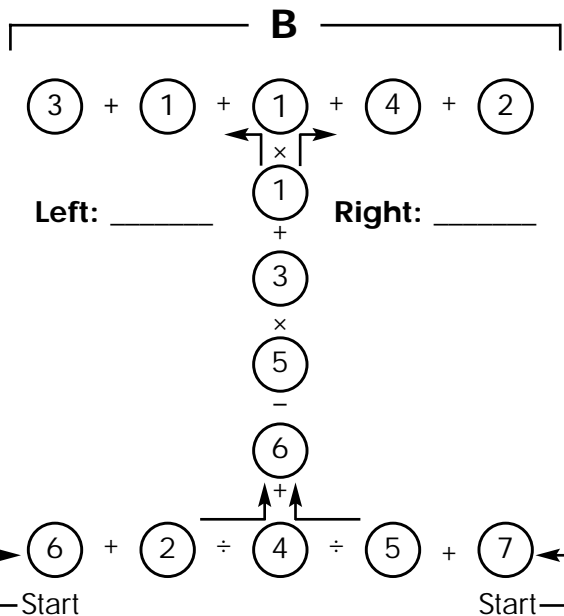
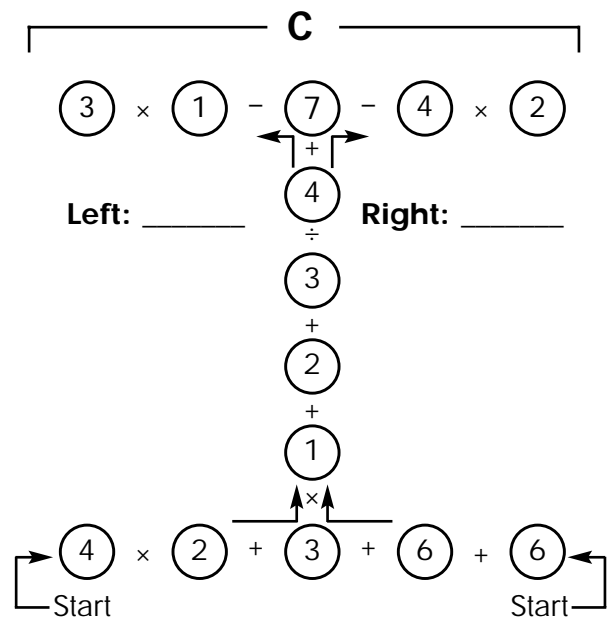
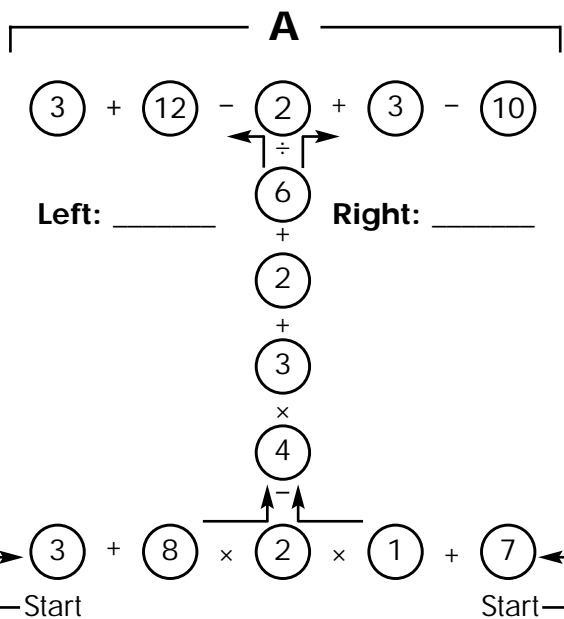
Figure Me Out



I am a one-digit number that is greater than most one-digit numbers. I am related to a musical scale. I am also the past tense of what you probably did to a good meal. What number am I?

THE I'S HAVE IT

1. For each I-shaped figure, begin at Start and do the operations in the order shown. Follow the arrows in, up, and out. Do this on both sides of the I. Use the middle column of the I for both sides. Write the total for the left side and the total for the right side.



2. On each I, circle the side with the greater answer.

SKILL BUILDERS 2

The Missing Number

Study the diagram to figure out the number pattern. What number is missing? _____
 What is the pattern? _____

4	5	1
2		3
4	0	6

Bee Eye Dee Eff Eye

Each letter represents a number.

1. Replace the letters with numbers to complete the problems. Hints: d = 7, i = 5

$$\begin{array}{r}
 \mathbf{d\ i\ d} \\
 + \mathbf{d\ i\ b} \\
 \hline
 \mathbf{f,\ i\ f\ i}
 \end{array}
 \quad + \quad \underline{\hspace{2cm}}
 \quad - \quad
 \begin{array}{r}
 \mathbf{f,\ i\ f\ i} \\
 - \mathbf{b\ i\ b} \\
 \hline
 \mathbf{l\ i\ d}
 \end{array}
 \quad - \quad \underline{\hspace{2cm}}$$

2. What number does each letter represent? d 7, i 5, b , f , l

Lunch Time

Five students are waiting in line to buy lunch. Read the clues about each. Then list the students in order from first to last (first to fifth) in line.

- Clues:** KATIE: I am behind someone, but it isn't a boy.
 TIM: I'm not at the end of the line.
 KYLE: Tim is behind me.
 ANDREA: No one is in front of me.
 DIEGO: Two students are between Katie and me.

First _____

Second _____

Third _____

Fourth _____

Fifth _____