INTRODUCTION

Dear Teacher,

Welcome to *AfterMaths*™. These reproducible books are is 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 E* is designed specifically for students in grade five.** However, the activities can be used with advanced mathematics students in grade four, as well as with students who require mathematics skills reinforcement in grade six.

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.

Author: Christopher Forest

Editor: Dale Lyle

Designer: Jamie Ruh

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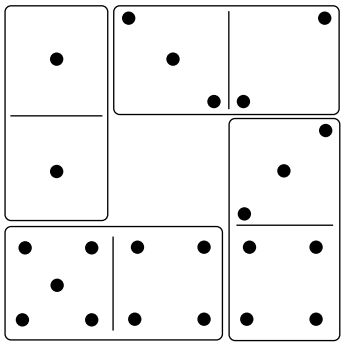
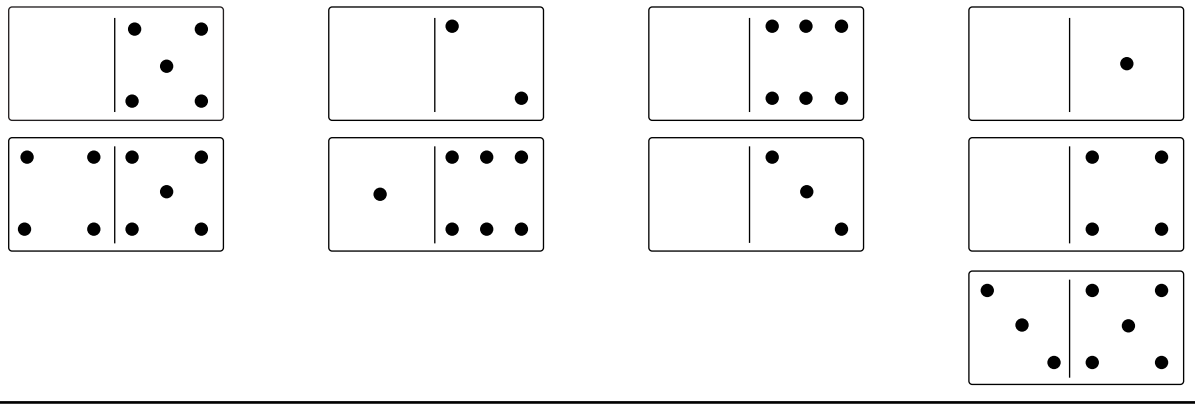
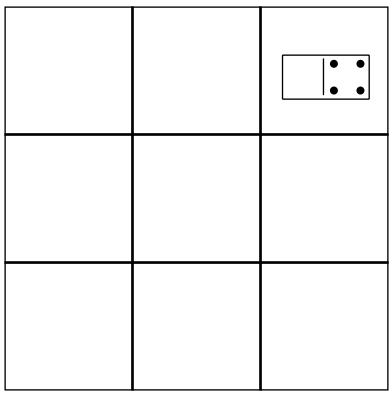
'DOMINOTION'

1. In the box to the right, redraw each of these four dominoes so that the dots on the top row, the bottom row, the left column, and the right column all equal the same number when added. Use real dominoes first for practice if you like.



2. Draw the following nine dominoes in the box at the bottom of the page so that the sum of the dots in the three rows, in the three columns, and in the two diagonals is 15. One domino has been placed for you.





NUMBER TRICKS

Peculiar Problems

1. Add the numbers below.

a.	**b.**	**c.**
243	628	748
+675	+317	+215

d. What do you notice about the digits in each problem (including the answer)?

_____

_____

2. Multiply each of the three-digit numbers below by 11. Then multiply that answer by 91.

a.	**b.**	**c.**
381	726	419
x 11	x 11	x 11
x 91	x 91	x 91

d. What do you notice about the answer to each problem above? _____

_____

3. Add the following numbers.

a.	**b.**
5 3 9	4 2 6
+ 3 9 3	+ 2 5 8

c. What do you notice about the two problems above, including the answers? (Look at the numerals across and then down.)

_____

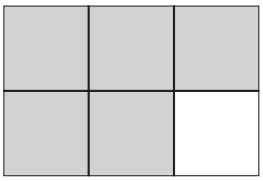
_____

Be Careful

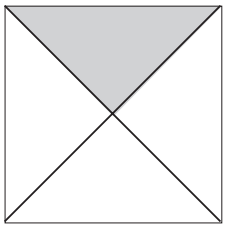
What is 30 divided by $\frac{1}{2}$ plus 5? _____

FUNNY FRACTIONS

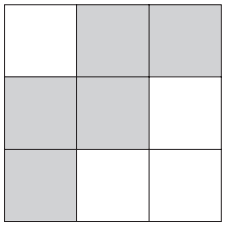
1. Use the following ten shapes to help you answer the riddle. First figure out what portion of each shape is shaded. Write the portion as a fraction reduced to its lowest terms.



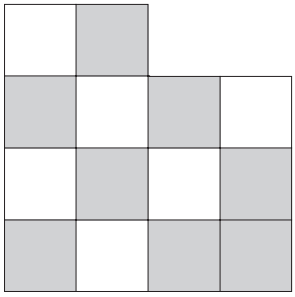
O = _____



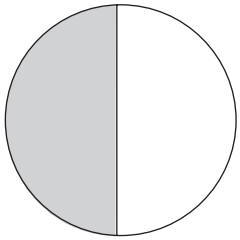
D = _____



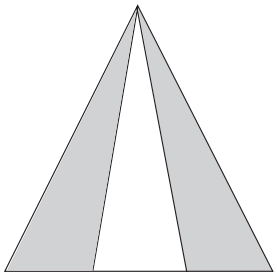
E = _____



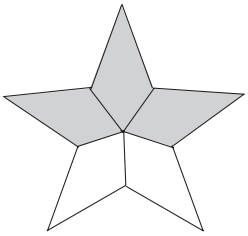
L = _____



H = _____



A = _____



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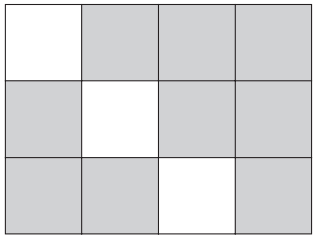
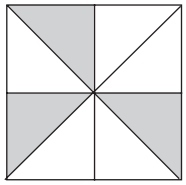
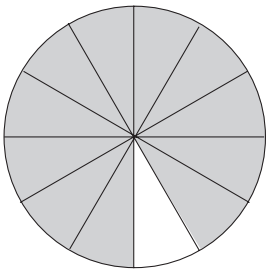


T = _____



W = _____



F = _____

2. Match the fractions from the shapes above with the fractions below. Write the letter of each shape above the appropriate fraction to answer the riddle.

___	___	___	___	___	___	___	___	___	___	?
$\frac{1}{4}$	$\frac{3}{5}$	$\frac{3}{8}$	$\frac{5}{9}$	$\frac{1}{2}$	$\frac{2}{3}$	$\frac{4}{7}$	$\frac{11}{12}$	$\frac{3}{4}$	$\frac{5}{6}$	

Riddle:

The circle said to the triangle 'Let's split.' What did the triangle reply?

_____