

# Arithmetic/ Mathematics

## Program

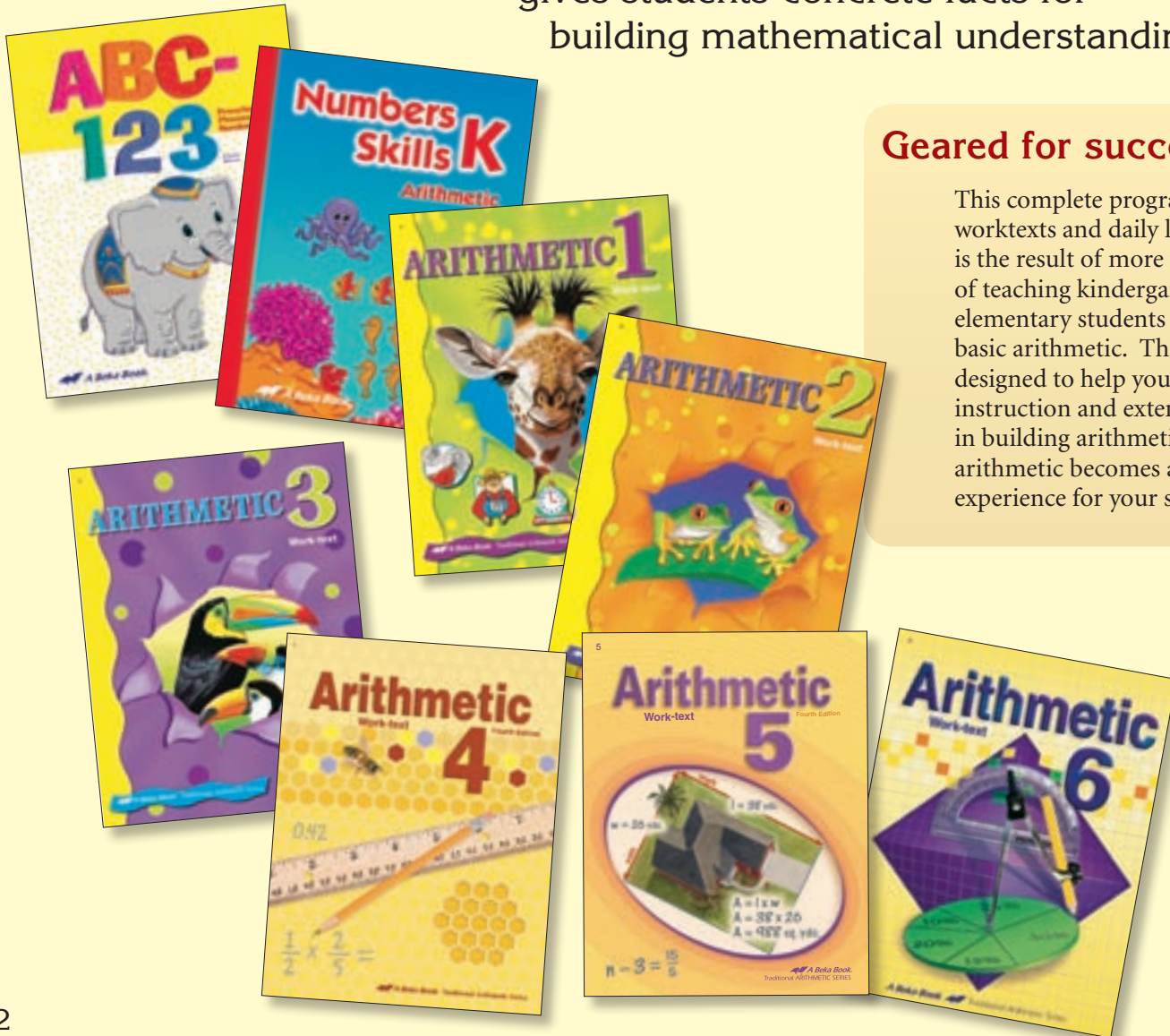


**A traditional  
program  
geared for  
success.**



# Traditional arithmetic/mathematics

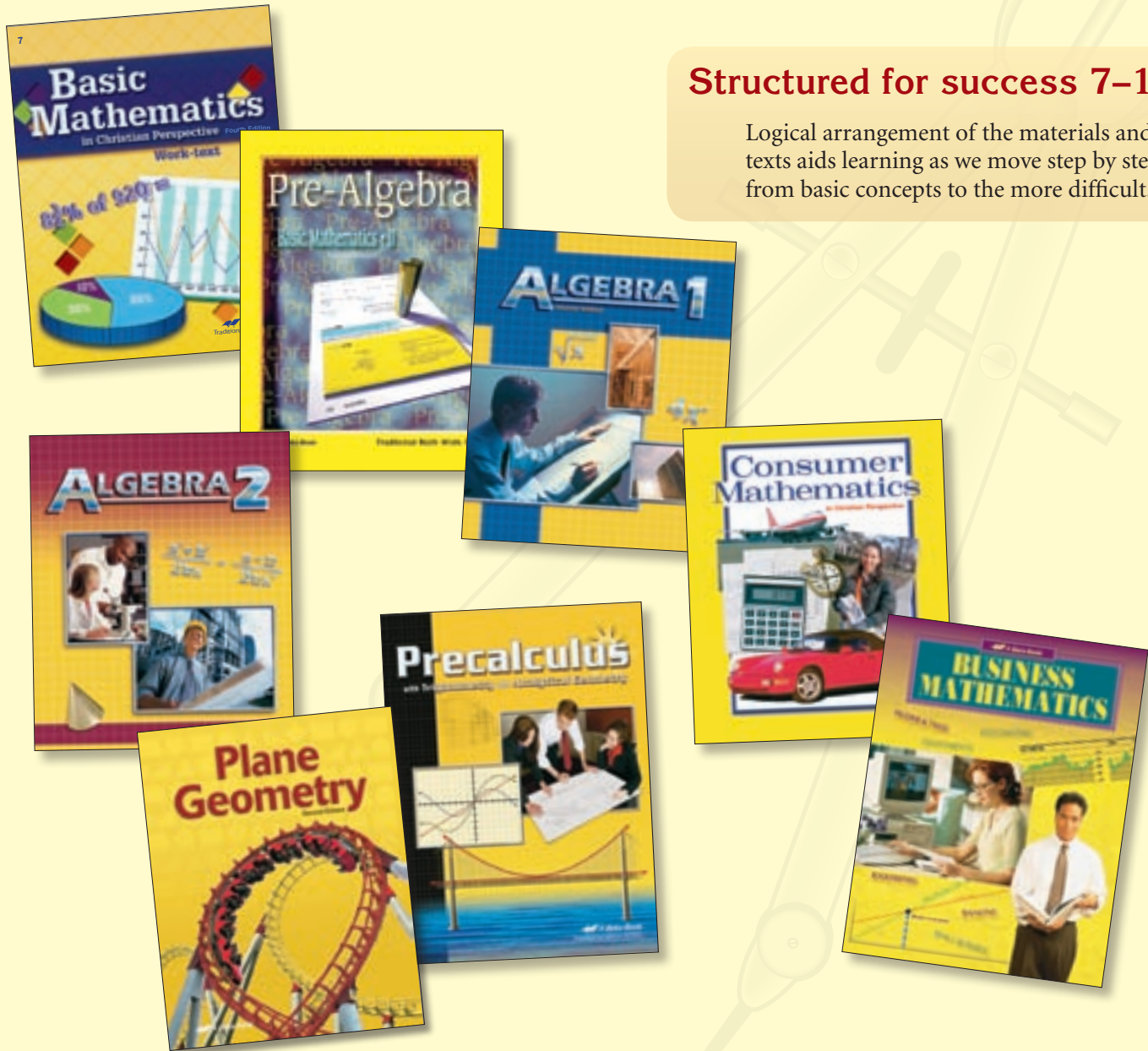
- stresses God's absolutes in creation
- trains students' mental abilities
- gives students concrete facts for building mathematical understanding



## Geared for success K-6

This complete program of worktexts and daily lesson plans is the result of more than 55 years of teaching kindergarten and elementary students to master basic arithmetic. The program is designed to help you provide clear instruction and extensive practice in building arithmetic skills so arithmetic becomes a positive experience for your students.

# from a Christian perspective...



**Structured for success 7–12**

Logical arrangement of the materials and texts aids learning as we move step by step from basic concepts to the more difficult.

# Students gain success in concepts,

## Spiraling method to skill building

The program's spiral method within each grade and from one grade to the next ensures repetition and continuous maintenance of basic skills.

## Arithmetic 5

The screenshot shows a worksheet with the following content:

- Concept explained:** A box explaining that to change a decimal to a fraction, write the decimal as the numerator and a power of 10 as the denominator. It includes examples:  $0.7 = \frac{7}{10}$ ,  $0.25 = \frac{25}{100} = \frac{1}{4}$ , and  $0.125 = \frac{125}{1000} = \frac{1}{8}$ .
- Class Practice:** A section with several problems for students to solve, such as  $0.3 = \frac{\square}{10}$ ,  $0.45 = \frac{\square}{100}$ , and  $0.6 = \frac{\square}{10}$ .

Concept explained

Concept examples

Extra practice if needed

Practice of new concept

Practice of recently learned skill

## Arithmetic 2 Seatwork page

The screenshot shows a seatwork page with various math problems:

- 1. Continue the counting patterns:**  $10, 20, 30$ ;  $100, 150$ ;  $110, 120$ .
- 2. What time is it?** Includes a clock face showing approximately 1:50.
- 3. How much money?** Includes images of coins and bills.
- 4. Write the missing numbers:**  $\frac{\square}{4} = \frac{1}{2}$ ,  $\frac{3}{\square} = \frac{1}{3}$ ,  $\frac{\square}{9} = \frac{1}{3}$ ,  $\frac{1}{\square} = \frac{1}{5}$ .

Review to keep skills current

Illustrated reviews

Concept explained and illustrated

Practice of new concept

## Classwork page

The screenshot shows a classwork page with the following content:

- Carrying to the Hundreds' Place:** A problem involving adding  $254 + 155 + 429$  with a grid illustration.
- Practice:** Several addition problems with missing digits, such as  $\begin{array}{r} \square \\ + 231 \\ \hline 465 \end{array}$ .
- Review:** A section with missing digits in equations like  $2\square9 + 12 = 341$ .

Story problem to build and train in application

Computational practice

Daily story problems for students to think and apply arithmetic knowledge

Daily review to keep skills current

Fun activities that help students master facts

Additional review to be completed for homework

The screenshot shows a homework page with the following content:

- Review:** A section with various math problems, including  $412 + 337 = \square$  and  $256 + 100 = \square$ .
- Fun activities:** A section with a number line showing  $1,000,000,000$  and a small illustration of a bear.

# computation, and application.

## Emphasis on problem solving

With emphasis on problem solving, students learn to apply mathematical concepts to real-life situations.

### Basic Math (Grade 7)

12.7 Area of a Triangle

**Example 12.7a**  
A triangle is a three-sided polygon. To find the area of a triangle, take one half of the base times the height. Use the formula  $A = \frac{1}{2}bh$ .

**Example 12.7b**  
A triangle has a base of 12 cm and a height of 5 cm. Find the area of the triangle.

**Example 12.7c**  
A triangle has a base of 10 cm and a height of 8 cm. Find the area of the triangle.

**Example 12.7d**  
A triangle has a base of 15 cm and a height of 6 cm. Find the area of the triangle.

**PRACTICE PROBLEMS 12.7**  
Find the area of triangles having these dimensions:

- base = 8 cm, height = 5 cm
- base = 12 cm, height = 7 cm
- base = 10 cm, height = 4 cm
- base = 15 cm, height = 9 cm
- base = 18 cm, height = 6 cm
- base = 20 cm, height = 10 cm

Clear statement of rules and facts

Concepts clearly explained by step-by-step examples

Abundant practice helps students learn and master important skills

**PROBLEM SOLVING**

- Mila's triangle had a perimeter that had one base and two equal sides. The base of the triangle was 10 cm and the height was 8 cm. Find the area of the triangle.
- Steve's triangle had a base that was 12 cm and a height that was 5 cm. The area of the triangle was 30 cm<sup>2</sup>. Find the length of the other two sides.
- Eric wanted to find the height of a triangle. The base of the triangle was 10 cm. The area of the triangle was 30 cm<sup>2</sup>. Find the height of the triangle.
- Eric wanted to know the height of a triangle. The base of the triangle was 10 cm. The area of the triangle was 30 cm<sup>2</sup>. Find the height of the triangle.

**DISAPPOINTING BELLS** Work on these problems on notebook paper.

Write the formulas.

- area of a triangle
- area of a square
- area of a rectangle
- area of a parallelogram
- area of a circle
- perimeter of a square
- perimeter of a triangle

**Transfer the data.** Give your work on another sheet of paper.

Shape	Base	Height	Area	Perim.
Triangle	10 cm	8 cm		
Rectangle	10 cm	8 cm		
Square	10 cm	10 cm		
Parallelogram	10 cm	8 cm		
Triangle	10 cm	8 cm		
Parallelogram	10 cm	8 cm		
Rectangle	10 cm	8 cm		

Word problems that develop good thinking skills

Ample review of current and past concepts

## Traditional approach to mathematics

As students learn concrete facts, they gain understanding, which builds the foundation for more abstract concepts they will encounter later on.

### Algebra 1

**7.4 Equations of Degree Higher Than the First**

The degree of an equation is the highest power of the variable in the equation. The degree of an equation is the highest power of the variable in the equation. The degree of an equation is the highest power of the variable in the equation.

**Example** Solve the equation  $x^2 + 3x - 4 = 0$ .

$x^2 + 3x - 4 = 0$   
 $(x + 4)(x - 1) = 0$   
 $x + 4 = 0$  or  $x - 1 = 0$   
 $x = -4$  or  $x = 1$

Lesson divisions guide teachers and students

Clear statements for basic understanding

Examples that clarify explanations

**Word Problems**

- The area of a triangle is 30 square centimeters. The base of the triangle is 10 centimeters. Find the height of the triangle.
- The area of a square is 100 square centimeters. Find the side length of the square.
- The area of a rectangle is 100 square centimeters. The length of the rectangle is 10 centimeters. Find the width of the rectangle.
- The area of a parallelogram is 100 square centimeters. The base of the parallelogram is 10 centimeters. Find the height of the parallelogram.
- The area of a circle is 100 square centimeters. Find the radius of the circle.
- The area of a triangle is 30 square centimeters. The base of the triangle is 10 centimeters. Find the height of the triangle.

Highlighted rules

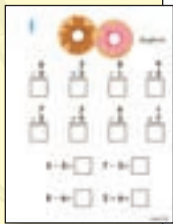
Practice

Word problems develop good thinking abilities

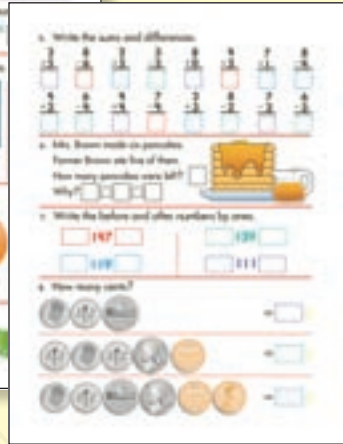
# Evaluate student success daily and weekly with assessment

## Arithmetic 1 Test and Speed Drill Book

### Speed Drill



### Test



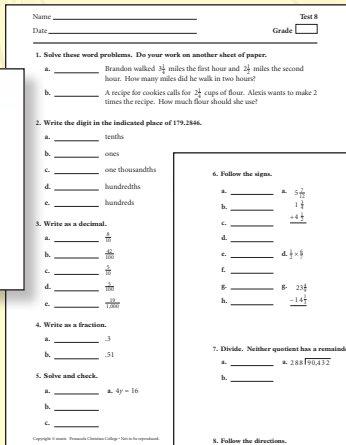
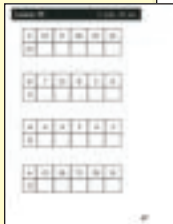
## A complete testing program

A set of tests allows you to continually evaluate students' progress. In kindergarten, evaluations are oral and written. For elementary grades, arithmetic combination drills and tests are included for the entire year in the Test and Speed Drill Book. In grades 7–12, test and quiz books are used to assess progress.

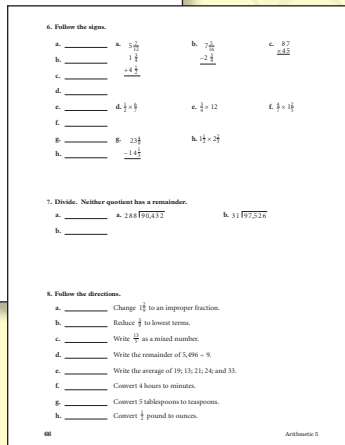
## Basic Math Quiz and Test Book

## Arithmetic 5 Quiz, Test, and Speed Drill Book

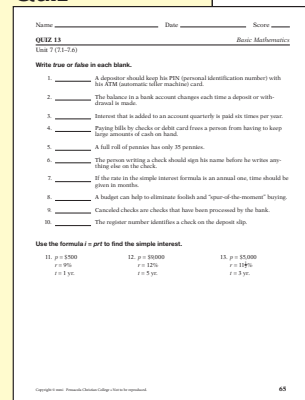
### Speed Drill



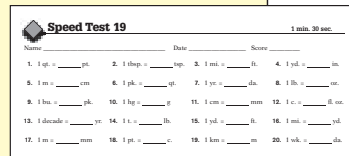
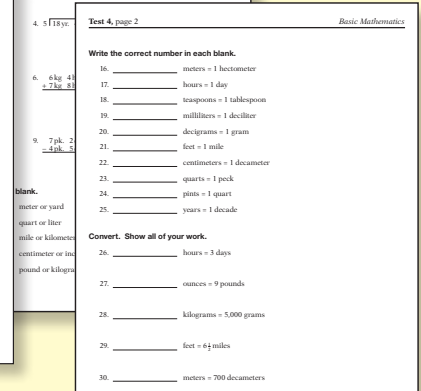
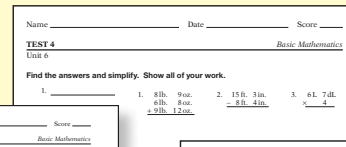
### Test



### Quiz



### Test



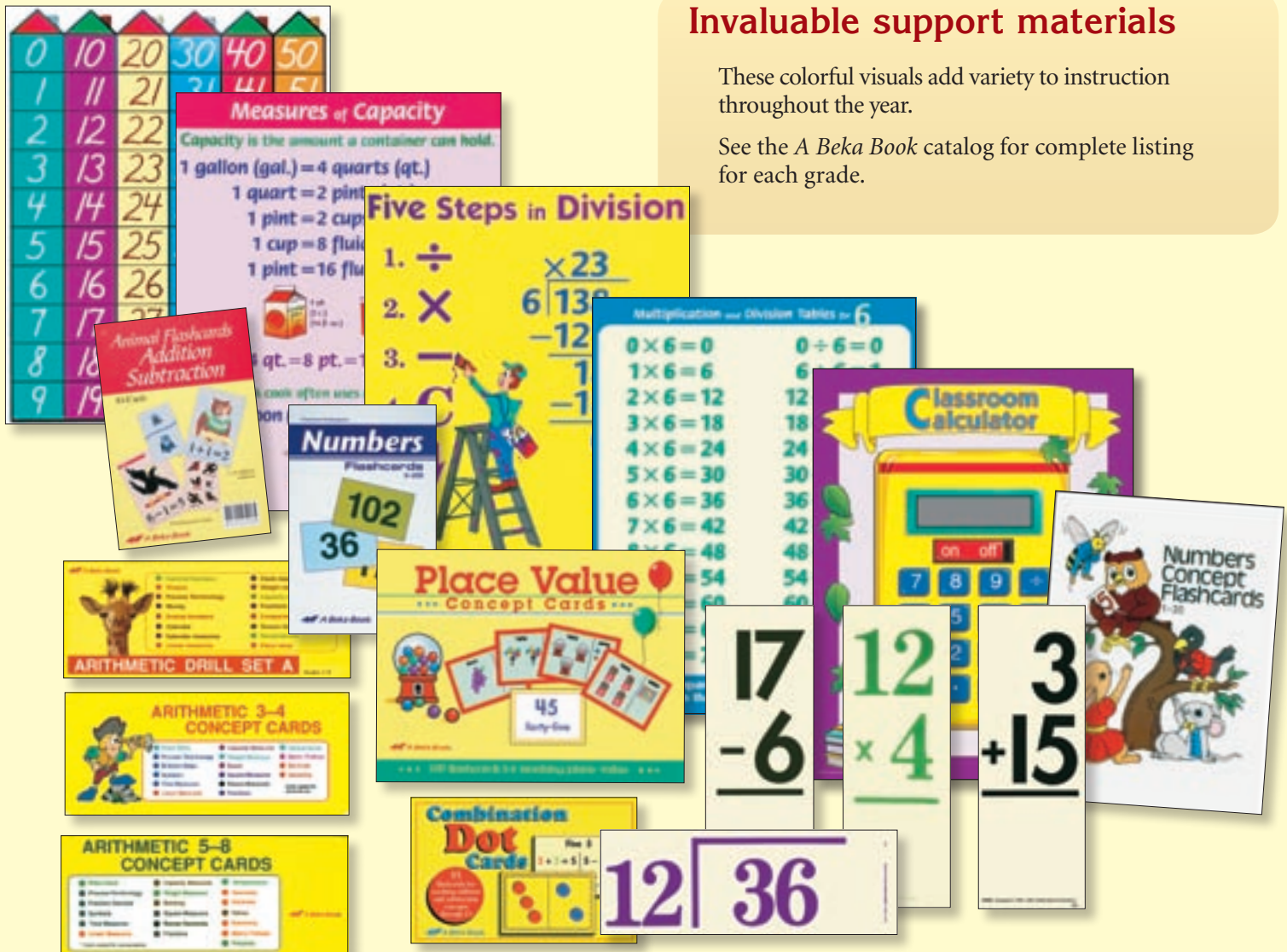
### Speed Test

# Success-oriented teaching visuals

## Invaluable support materials

These colorful visuals add variety to instruction throughout the year.

See the *A Beka Book* catalog for complete listing for each grade.



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1-877-A BEKA BOOK (toll free)  
(1-877-223-5226)

abeka.com