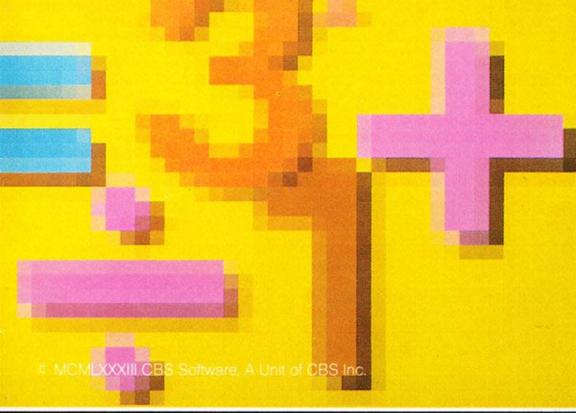# SUCCESS WITH MATH™

Multiplication and Division
User's Manual

CBS
SOFTWARE

Setting up your Computer

For Disk:

1. Following manufacturer's instructions, hook up your computer and disk drive to a monitor or TV.

2. Insert the program disk into the disk drive and close the drive door.

3. Turn your computer and monitor on.

4. Turn down the volume on your monitor.

5. If your disk drive does not automatically boot disks, follow manufacturer's instructions for booting the disk.

6. Select either Multiplication or Division from the program menu.

For Cassette:

1. Following manufacturer's instructions, hook up your computer and program recorder to a monitor or TV

2. Insert the program cassette into the program recorder following cassette label instructions.

3. Turn your computer and monitor on.

4. Turn down the volume on your monitor.

5. Load the program into the computer following manufacturer's instructions.

Program Objective

This SUCCESS WITH MATH™ program provides comprehensive drill and practice in multiplication and long division problems utilizing necessary addition and subtraction. Once the program has been loaded into the computer and either Multiplication or Division selected, the program itself will take over and instruct the user on how to proceed.

Program Descriptions

Multiplication

All problems are randomly generated so that a different set of problems will be presented each time the program is run. User may determine the size of the multiplier up to 3 digits. The multiplicand in each problem will always be 3 digits. For example: a user choosing 3 digits might get a problem like this:

$$
\begin{array}{r}
692 \\
\times\ 348 \\
\hline
\end{array}
$$

The white square, called a cursor, locates the position of the next keyboard entry. Each problem is solved as if the user were doing it on a piece of paper, one digit at a time. The cursor continues to move after each correct entry. *Users must enter the carry even if it is zero.*

```
  ▮
  692        User enters 6 in first column; cursor
× 348        moves to top of next column for the
    6        carry.


  1
  692        User enters 1 above second column;
× 348        cursor moves to bottom of second
  ▮6         column for next digit.
```

This procedure continues until the multiplicand has been fully multiplied. The problem will then look like this:

```
     692
   × 348
    5536
    2768
   2076
      ▮
```

The final product may then be obtained using the rules for addition with carrying. Remember that the carry must always be entered even if it is zero.

All errors are immediately called out and the user may then try a new answer. If a second error is made, the correct answer for that step will be shown after which the user may continue the problem.

Division

All problems are randomly generated so that a different set of problems will be presented each time the program is run. User may determine the size of the divisor up to 3 digits. For example: a user choosing 3 digits might get a problem like this:

$$234\overline{)183690}$$

The cursor locates the position of the next keyboard entry. Each problem is solved as if the user were doing it on a piece of paper. The cursor continues to move after each correct entry.

$$\frac{7}{234\overline{)183690}}$$

User enters 7; cursor moves below the 6 in the dividend.

At this point the user must multiply the divisor by the first digit of the quotient following the rules for multiplication with carrying. Remember that the carry must always be entered even if it is zero.

$$\frac{7}{234\overline{)183690}}$$
$$8$$

User enters 8; cursor moves above the 3 in the divisor for the carry.

$$\frac{2 \quad 7}{234\overline{)183690}}$$
$$8$$

User enters 2; cursor moves below the 3 in the dividend.

This procedure continues until the divisor has been fully multiplied. The problem will then look like this:

$$
\begin{array}{r}
7\ \\
234\overline{)183690} \\
1638 \\
\hline
\end{array}
$$

The new dividend is then obtained using the rules for subtraction with borrowing. The problem will then look like this:

$$
\begin{array}{r}
7\ \\
234\overline{)183690} \\
1638 \\
\hline
1989 \\
\end{array}
$$

The long division procedure is continued until the final quotient is obtained.

All errors are immediately called out and the user may then try a new answer. If a second error is made, the correct answer for that step will be shown after which the user may continue the problem. *The user always succeeds in solving the problem and knows exactly where errors have been made.*

Other programs in the Success With Math™ series from CBS Software:

Addition and Subtraction—Grade Levels 1 to 4
Linear Equations—Grade Levels 7 to 11
Quadratic Equations—Grade Levels 9 to 12

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