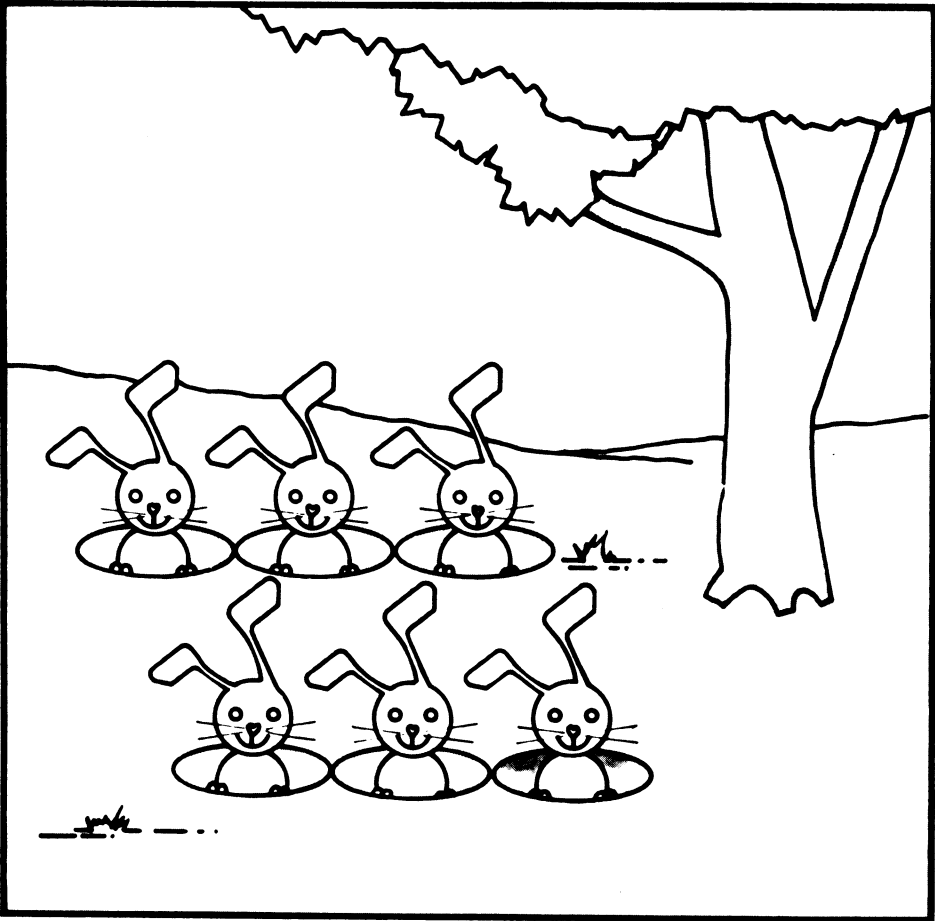


microMultiplication



Introduction

Cute cottontail critters make multiplication fun! **microMultiplication** teaches you the values of numbers, shows you how to multiply, quizzes you on the multiplication you have learned, and has a calculator that can help you correct your math homework.

microMultiplication has four options. Option one uses rabbits to show you the values of the numbers one through nine. Option two asks you to count rabbits you see on the screen. In option three, the rabbits introduce you to single-digit multiplication. Option four gives you a quiz on multiplication problems through the 12's table and lets you use the **microMultiplication** calculator to get answers to your problems or check your homework.

Ages: 4-10

Required Hardware

Tape Version: Atari 4/8/1200 with 16K RAM, Atari BASIC Language Cartridge, Atari 410 Program Recorder.

Disk Version: Atari 8/1200 with 24K RAM, Atari BASIC Language Cartridge, Atari 810 Disk Drive.

Making Back-up Copies

For your convenience, your **microMultiplication** program has not been copy protected. We suggest that you follow the instructions in your Atari reference manual to make a back-up copy of the program for your personal use.*

Directions

Tape Version

1. Be sure your computer is turned OFF.
2. Insert the BASIC Language Cartridge into the computer's cartridge slot.
3. Insert the **microMultiplication** tape into the program recorder's cassette holder. Press REWIND on the recorder until the tape rewinds completely, then press STOP.
4. Turn on the computer and the TV or monitor.
5. Using the computer's keyboard, type CLOAD, then press RETURN.
6. Press PLAY on the program recorder, then press RETURN on the computer's

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keyboard. Please wait 5 minutes for the program to load.

7. When the word **READY** appears on the screen, **STOP** the recorder. Type **RUN** on the keyboard and press **RETURN**.

Disk Version

1. Be sure your computer is turned **OFF**.
2. Insert the **BASIC Language Cartridge** into the computer's cartridge slot.
3. Turn on the disk drive.
4. When the busy light on the disk drive goes out, open the drive door. Insert the **microMultiplication** disk with the label in the lower right-hand corner nearest you. Close the door.
5. Turn on the computer and your TV or monitor. The program will load and run automatically.

The title screen now appears. In a few moments, the menu showing your game options will be displayed on the screen. Choose an option by typing its corresponding number.

Game Options

1. Rabbits
2. Numbers
3. Multiplying rabbits
4. Multiplying numbers

1. Rabbits: Number Values

To see number values, type “1” when the menu is displayed on the screen.

Nine rabbit burrows and the message HOW MANY RABBITS TO APPEAR? are displayed on the screen. Type in the number (from 1–9) of rabbits you want to see. The rabbits peek out of the burrows. Each rabbit is counted by a number appearing next to it.

After the group of rabbits is correctly counted, the exercise is repeated. The rabbit burrows and message appear again. Choose any number you wish and that number of rabbits are displayed and counted for you.

You are shown how many rabbits a number stands for. You can see for yourself whether 5 is more or fewer than 2.

When you want to stop playing RABBITS, just press the RETURN key. The menu appears on the screen and you may choose another option.

2. Numbers: Counting

To practice counting, type “2” when the menu is displayed on the screen.

A number of rabbits appear in their burrows with the message HOW MANY RABBITS OUT OF THEIR HOLES?. Count the rabbits and then type the number you think there are. If you are right, a merry tune plays! A wrong answer produces a sad tune, but you get two more

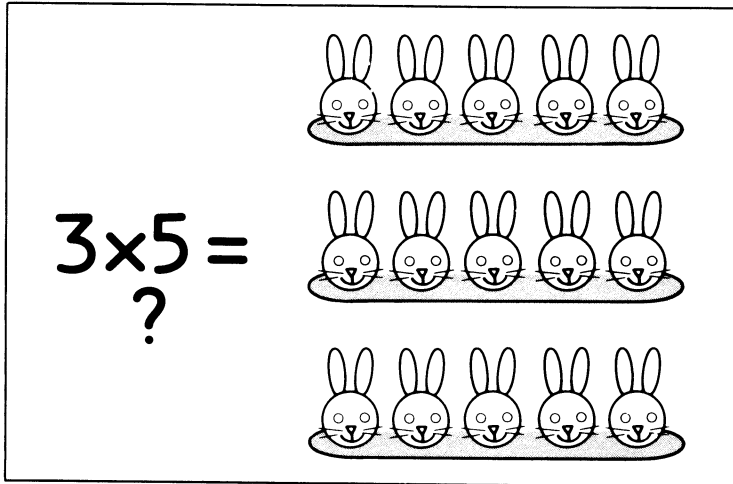
chances. If you still don't count the rabbits correctly, that's okay; the computer shows you the correct number.

When you wish to stop playing NUMBERS, just press the RETURN key. The menu appears on the screen and you may choose another option.

3. Multiplying Rabbits

To learn to multiply, type "3" when the menu is displayed on the screen.

The message HELP WITH RABBITS? appears on the screen, asking you if you wish to play with or without extra help. If you type "Y",* a multiplication problem like the following one is displayed on your screen.

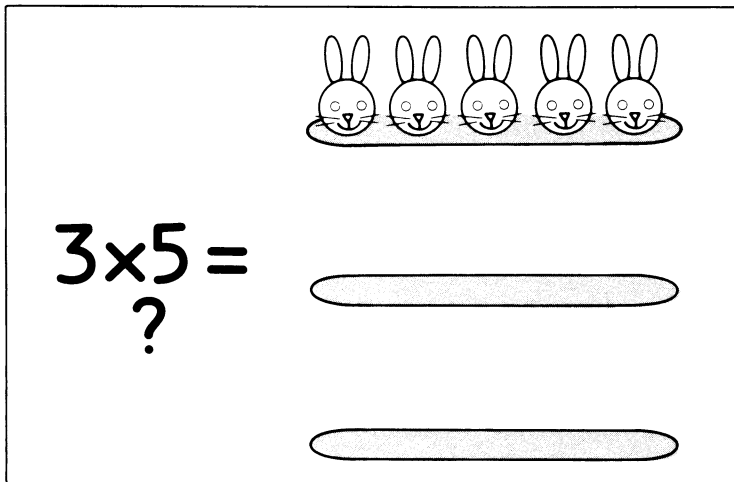


*Note: The (CAPS/LOWR) key must be in the up position when you type "Y" or "N".

Notice that the number of rabbits which correspond to the answer are grouped in burrows. For example, for 3×5 , there are three burrows, each with five rabbits.

Wait for all the burrows to be filled with rabbits and the “?” to appear, then type your answer. (You may count the rabbits to get the correct answer.) If you are correct, a happy tune plays. An incorrect answer produces an unhappy tune, but you get two more chances. The correct answer is given if you still don’t get it.

If you type “N” in response to the message HELP WITH RABBITS?, a multiplication problem like the following one is displayed.



The image shows a multiplication problem $3 \times 5 = ?$ inside a rectangular frame. To the right of the equation is a burrow containing five rabbits. Below the equation are two empty burrows for the answer.

A group of rabbits in a burrow appears, then the number of burrows needed to house the total number of rabbits are shown. You must figure out how many rabbits will appear. That is, you

must multiply the number of rabbits by the number of burrows. After the “?” appears, type in your answer.

If you are right, a cheery melody plays and the total number of rabbits peek out of the burrows. A wrong answer produces an unhappy tune, but you get two more chances. If you still don't get it, the correct answer is given and the right number of rabbits peek out of the burrows.

When you wish to stop playing MULTIPLYING RABBITS, just press the RETURN key. The menu appears on the screen and you may choose another option.

4. Multiplying Numbers

To take a multiplication quiz or use the **microMultiplication** calculator, type “4” when the menu is displayed on the screen. The message QUIZ OR CALCULATOR? then appears.

Quiz

If you choose to take a quiz, type “Q” in response to the message QUIZ OR CALCULATOR?.* A multiplication problem, six burrows, and two carrots appear on the screen.

If your answer has more than one digit, digits must be entered from right to left, beginning with the units' digit. The “^” symbol shows which digit you are to type in.

*Note: The (CAPS/LOWR) key must be in the up position when you type “Q” or “C”.

For example:

$$\begin{array}{r} 15 \\ \times 2 \\ \hline 0 \\ \wedge \end{array} \quad \rightarrow \quad \begin{array}{r} 1 \\ 15 \\ \times 2 \\ \hline 30 \\ \wedge \end{array}$$

If both of the numbers to be multiplied have two digits, you are to supply each of the two multiplications that are needed to obtain the answer. These are called partial products.

For example:

$$\begin{array}{r} 12 \\ \times 11 \\ \hline 2 \\ \wedge \end{array} \quad \rightarrow \quad \begin{array}{r} 12 \\ \times 11 \\ \hline 12 \\ \wedge \end{array} \quad \rightarrow \quad \begin{array}{r} 12 \\ \times 11 \\ \hline 12 \\ 2 \\ \wedge \end{array} \quad \rightarrow \quad \begin{array}{r} 12 \\ \times 11 \\ \hline 12 \\ 12 \\ \wedge \end{array}$$

The computer draws a line under the partial products and calculates the total:

$$\begin{array}{r} 12 \\ \times 11 \\ \hline 12 \\ +12 \\ \hline 132 \end{array}$$

When you answer correctly, a jolly tune plays and a rabbit peeks out of the left-hand burrow and snatches a carrot. If you answer incorrectly, an unhappy tune plays and you are given two more chances. If you still don't get it, the correct answer is given and a rabbit emerges from the right-hand burrow to snatch a carrot.

The computer tallies your right and wrong answers on the screen as you take the quiz. The problems get more difficult as you play. Practice is provided through the 12's table.

When you are finished with the quiz, press the RETURN key. You are then given your final score. Please wait a moment for the menu to reappear.

Calculator

If you decide to use the **microMultiplication** calculator, type "C" in response to the message QUIZ OR CALCULATOR?. Instructions appear at the bottom of the screen.

Enter a number with as many as 4 digits (any number from 0 through 9,999) and press the space bar. Then enter the number you wish to multiply by the first number you typed in; this number may also have as many as 4 digits. Press the space bar, and in a few seconds the **microMultiplication** calculator will give you the correct product.

Press the ESCAPE key to begin a new multiplication example. Use the **microMultiplication** calculator to check your homework!

When you are finished using the calculator, press the RETURN key to return to the menu.

Don't Forget

Whenever you wish to return to the menu to try another option, press the RETURN key.

When taking the QUIZ, if your answer is 10 or more you must enter the digits from right to left. If your answer is 64, type "4", then type "6". Actually, you work this way when you multiply using paper and pencil.

If you have the disk version of **microMultiplication**, make sure the red busy light on the disk drive is off before you remove the disk.

Now that you're a super multiplier, try the rest of the **microMath** series. In **microAddition**, apples teach you how to add. In **microSubtraction**, birds help you learn to subtract. In **microDivision**, fish show you how to divide. All of them are fun!

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