Counting

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ATARI®
LEARNING SYSTEMS

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Using This Program at Home

Many ATARI® Learning Systems program manuals were originally designed for use by teachers in the classroom. The programs themselves, however, are no less engaging and instructive for "independent learners"— children, students, and adults—working at home.

Every manual includes a "Getting Started" section that explains how to load the program into your computer system quickly and easily. Since many basic prompts and other instructions are displayed right on your screen, that's all you'll need to begin learning and exploring with most ATARI Learning Systems programs. But whether you're a parent, a tutor, or a home learner teaching yourself, it's a good idea to look through the teaching materials in your manual. You're likely to find important details on using the program, valuable supplementary information on its subject matter, and some creative ideas for getting the most educational and entertainment value out of your ATARI Learning Systems program.

Introduction

This six-part primary diskette will add interest and excitement to the teaching of primary arithmetic skills. The programs are organized in such a way that you may use them in a variety of combinations for individual drill and practice. For small-group instruction, or with two or three students working in a group, the arithmetic programs on this diskette will turn counting, counting identical groups, and addition into a whimsical game. Many teachers may choose to use these programs as a large-group instructional tool.

The *Counting* module consists of one diskette and this guide. It's designed for use with students in kindergarten through second grade. The diskette will operate on all ATARI® home computers. This guide provides additional activities and information necessary to use the programs effectively in the classroom setting. If you wish to discontinue a program before it's completed, just press the *ESC* key twice — the key is located in the upper left corner of your machine.

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Getting Started

Follow these steps to load the Counting program into your ATARI computer system:

1. With your computer turned off, turn on your television set or monitor and disk drive. Wait for the busy light on the disk drive to go out.

2. If your computer is *not* equipped with built-in ATARI BASIC, insert an ATARI BASIC cartridge in the cartridge slot (the left cartridge slot on the ATARI 800® computer).

3. Insert the Counting diskette in your disk drive (disk drive 1, if you have more than one drive) and close the disk drive door or latch.

4. Turn on your computer. As your disk drive goes to work, you'll hear a beeping sound while the first part of the program loads into your computer. After several moments, a title screen will appear on your screen, followed by a menu of program selections.

Because your computer loads portions of the program as you use them, you must leave the Counting diskette in your disk drive while using the program.

Some questions asked by the Counting program require a simple Yes or No answer. You may respond by typing **YES** or **NO**, or simply by typing **Y** or **N**. Always press **RETURN** to confirm your response to a question. You may usually change your response before pressing **RETURN**; just use the **DELETE BACK SPACE** key to delete your original response, then type in the new response.

To return to the program menu, hold down the
ESC key. When the question Do you want to
try again? appears, type **N** and press
RETURN.

Smile

Counting Objects

Specific Topic: Mathematics
        (Counting)

Type: Drill and Practice

Reading Level: Pre-reading

Grade Level: Preschool–Grade 2

Description

Smile provides practice in counting objects. Several identical objects appear on the screen, with the number of objects randomly varying from one through nine. The numerals 1–9 are printed along the bottom of the screen. The student types in the numeral corresponding to the number of objects shown.

Objectives

- To count objects numbering one through nine

- To identify the numeral that represents the number of objects

- To arrange a group of integer numbers in numerical order

Smile

Background Information

Nine problems are presented. The number of objects in each problem randomly varies from one through nine. The groups of objects also randomly vary; for example, televisions, tubes of toothpaste, banjos, dolls, and several other objects are used.

A happy face indicates a correct response. If an incorrect response is given, that numeral is removed from the screen and the student must try another response until the correct one is given. The student will continue to respond until only one number remains.

Smile

Use in An Instructional Setting	**Preparation**

Preparation

Students should be able to recite the numbers one through ten in sequence. They should have some understanding of the one-to-one correspondence between objects and these numbers, and that this constitutes counting. They should also know that certain symbols (numerals) represent these numbers.

A student not familiar with the keyboard may need help finding the numeral keys.

Using the Program

Individual students can use this program with little or no direction from the teacher. It provides students—even very young children—with a pleasant, successful educational experience on the computer.

Smile can be used to supplement or replace printed worksheets on counting as many as nine objects. It can also provide varied examples for students needing additional practice in counting.
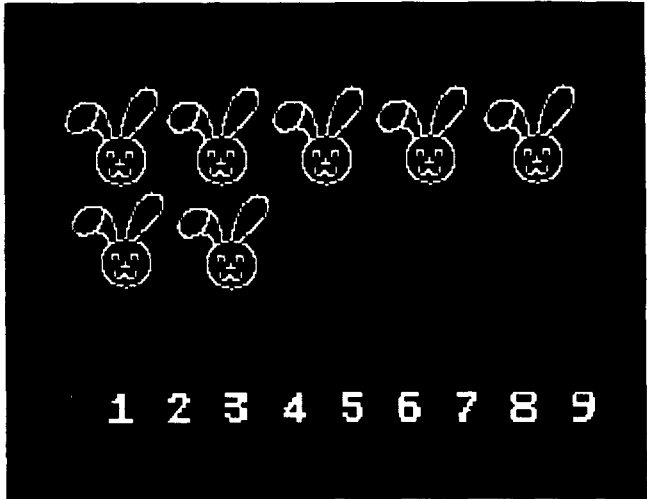
Follow-up

Students who have successfully completed this program could go on to the program Wuzzle, which provides practice in counting two different types of objects mixed together.
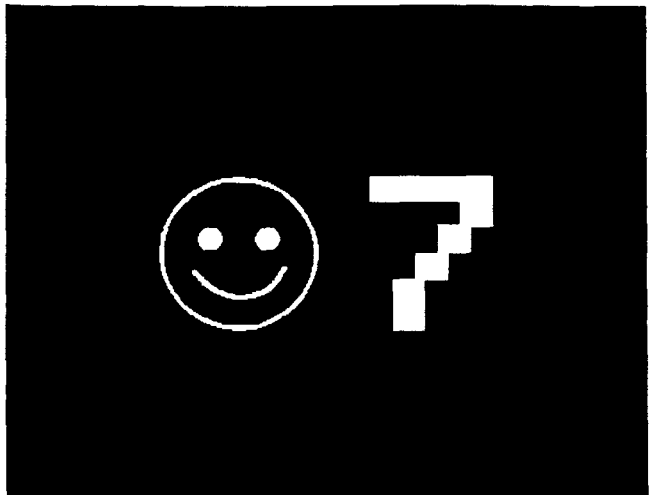
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Smile

A group of objects is shown, along with the numerals 1–9. The student selects the numeral that indicates the number of objects on the screen.
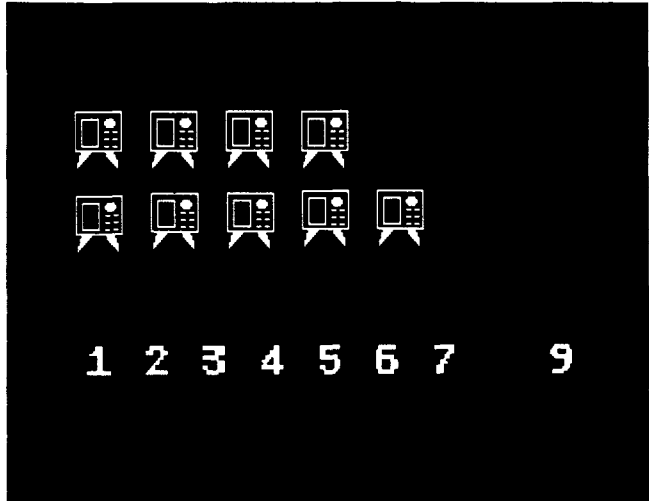
When the student enters the correct numeral, a smiling face and the numeral appear, with the numeral flashing three times.
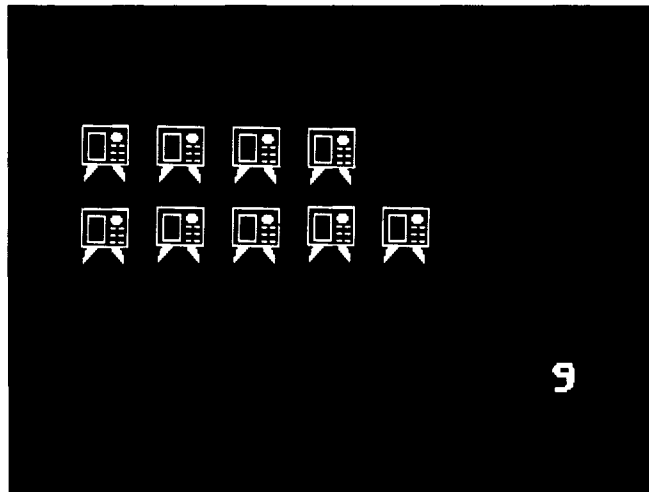
Examples of Screen Output

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Smile

When the student gives an incorrect response, that numeral is removed from the screen.

The student has nine chances to enter the correct numeral.

Examples of Screen Output

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Wuzzle

Counting Mixed Objects

Specific Topic:	Mathematics (Counting)
Type:	Drill
Reading Level:	Pre-reading
Grade Level:	Preschool–Grade 2

Description

Wuzzle provides practice in counting objects in a group of mixed shapes. An assortment of two different kinds of objects—for example, dolls and banjos—appears on the screen. The question "How many _____ ?" (with the appropriate object shown) is printed at the bottom of the screen. The student then counts the objects and types in the corresponding numeral.

Objectives

• To count objects numbering one through nine

• To identify the numeral that represents the number of objects

• To distinguish between two types of objects, counting only the type requested

• To arrange a group of integer numbers in numerical order

Wuzzle

Background
Information
The screen shows a group of two different kinds of objects. The numbers and objects are randomly chosen, with the total number varying from one through nine.

When the response is correct on the first try, the wuzzle appears in the lower corner of the screen and does a trick. But if the response isn't correct until the second try, the wuzzle simply appears, then disappears without doing a trick.

After an incorrect response, the student's answer is removed from the screen. After a second incorrect response, the student's answer is again removed from the screen and the other objects are erased from the screen, leaving only the objects to be counted. After a third error, the correct answer is flashed on the screen. Then a new problem is presented. In all, nine problems are presented, each with two separate responses. Each problem contains two questions requiring the student to count both sets of objects.

Wuzzle

Preparation

In most cases, students should use the program Smile before using Wuzzle.

Students should be able to recite the numbers one through nine in sequence and demonstrate a one-to-one correspondence between objects and those numbers—in other words, know how to count. They should be able to identify the numerals that represent these numbers by naming them. And they should distinguish between two kinds of objects by pointing to those of one kind.

A student not familiar with the keyboard may need help finding the numeral keys.

A nonreading student should be told that the sentence "How many _____ ?" means to count the objects.

Using the Program

This program can be used by an individual student or by two students taking turns on each two-part question.
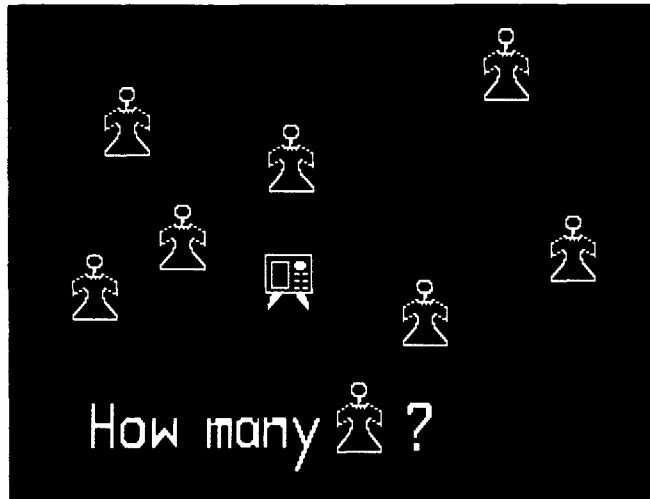
Follow-up

Students who have successfully completed this program could proceed to the program Spaceship, which provides practice in adding groups of objects.
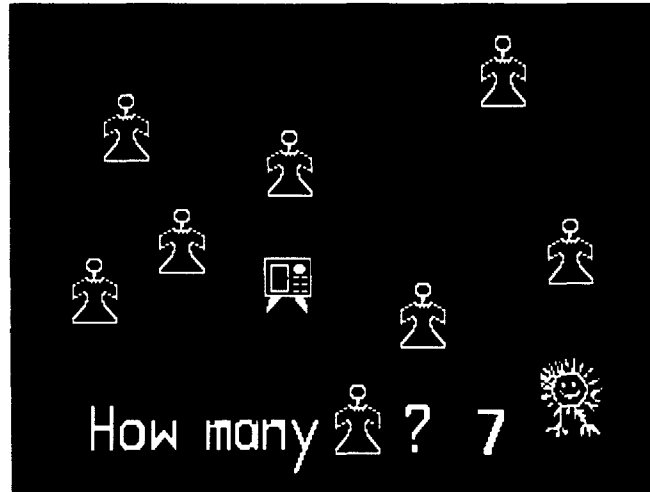
A student could make a drawing that shows several of each of three or four different shapes, and another student could then count each type of shape.

Wuzzle

Sample Runs

A group of two different kinds of objects is shown with the question "how many (one kind of object)?"
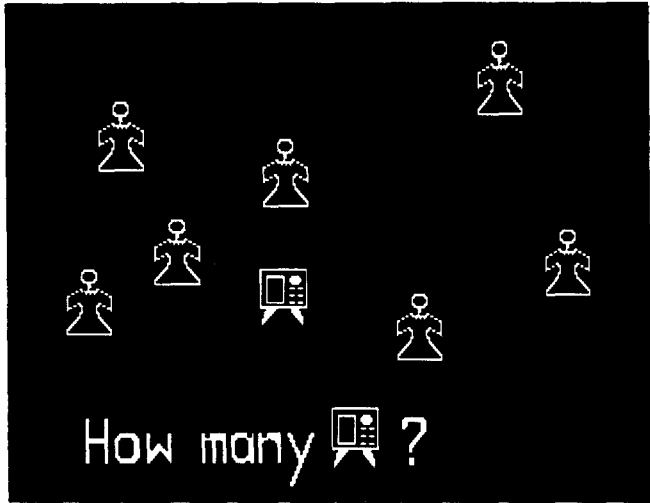

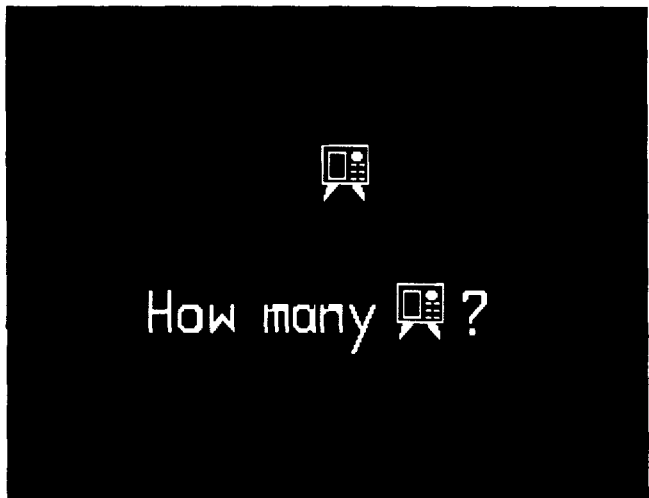When a student enters the correct response, the wuzzle appears and does a trick.

Examples of Screen Output

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Wuzzle

How many 📺?

Then, as a second question, the student is asked to count the number of objects in the other group.

How many 📺?

When the student gives an incorrect response, that response is removed from the screen. After the next wrong answer, the unneeded objects are erased.

Examples of Screen Output

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Spaceship

Adding Groups of Objects

Specific Topic:	Mathematics (Addition)
Type:	Drill
Reading Level:	Pre-reading
Grade Level:	Kindergarten– Grade 2

Description

In Spaceship the student adds two groups of identical objects by counting the total number of objects.

Two sets of objects—the total of which is no greater than nine—appear on the left side of the screen. The vertical addition problem appears on the right side of the screen with the addition sign.

A question mark appears under the vertical addition problem. The student then enters the numeral that represents the total number of objects.

Spaceship

Objectives

- To add two whole numbers by counting the total number of objects in each of two sets that contain the given numbers of members

- To identify the numeral that represents the number of objects

- To visualize the addition of two whole numbers by seeing two corresponding groups of objects together on the screen

- To become accustomed to working addition problems in both the vertical and horizontal formats

- To be able to recall the basic facts of addition

Spaceship

Nine problems are given. The objects are randomly chosen and include drums, swords, televisions, a piece of pie, and others.

After a question mark appears under the vertical addition problem, the student types in an answer. If it's incorrect, the incorrect numeral is crossed out and replaced by the question mark. The student tries the same problem again. After the second incorrect response, the correct answer is flashed on the screen in place of the question mark.

After three correct responses, the spaceship shoots at an enemy ship. (Be sure the sound is turned on so the student can hear the rocket.)

Spaceship

Preparation

In most cases, students should use the programs Smile and Wuzzle before using Spaceship.

The student must be able to demonstrate the counting of like objects by identifying the numeral that corresponds to the number of objects. The student should understand the meaning of the addition sign, +, and should be aware that the vertical and horizontal formats of addition problems are equivalent.

Using the Program

This program can best be used by individual students, proceeding at their own rates through the problems. Encourage students to count (rather than guess) the total number of objects, pointing to them or touching them as they count.

Follow-up

Students could make up their own addition problems, drawing simple objects and writing the numerals to represent the number of objects. These could be exchanged, so that students solve each other's problems.

Spaceship

Give the students an addition problem in
numerals—for example $2 + 3 = 5$—and ask
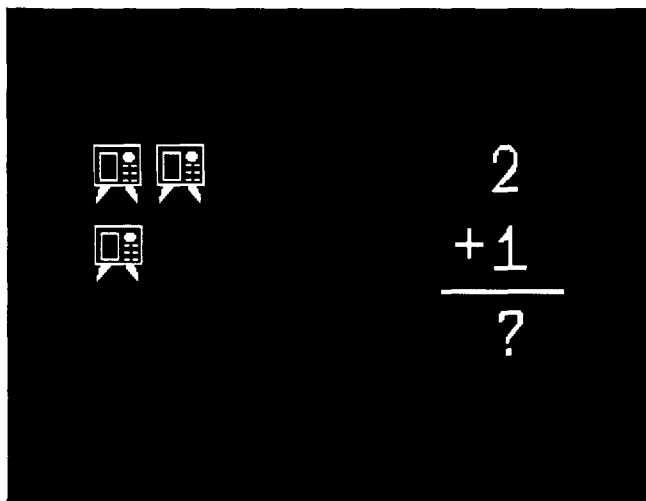them to draw a picture to represent this
problem. For example:
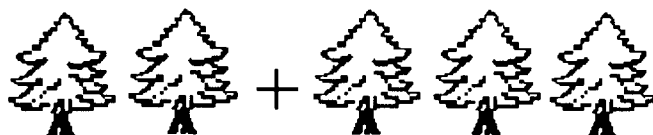
Give the students a number of objects—say,
six—and ask them to draw as many different
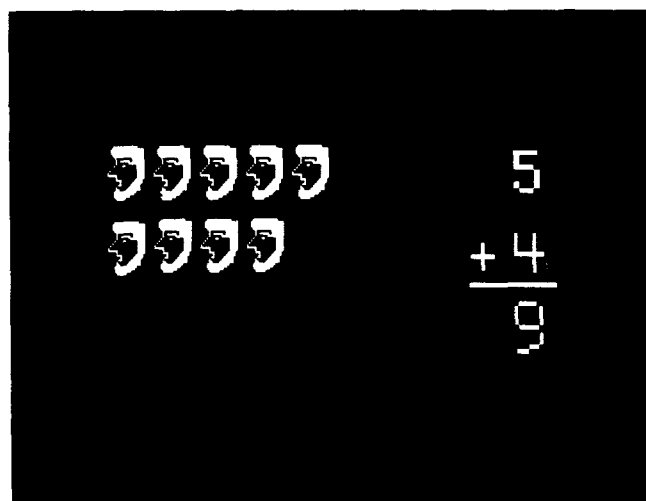pictures as they can, showing six as two groups
of objects.

Spaceship

Two sets of
objects with their
corresponding
numerals in the
vertical addition
format appear on
the screen.

$$\begin{array}{r} 2 \\ +1 \\ \hline ? \end{array}$$

When the student's
response is correct,
the answer appears
with the problem on
the screen.
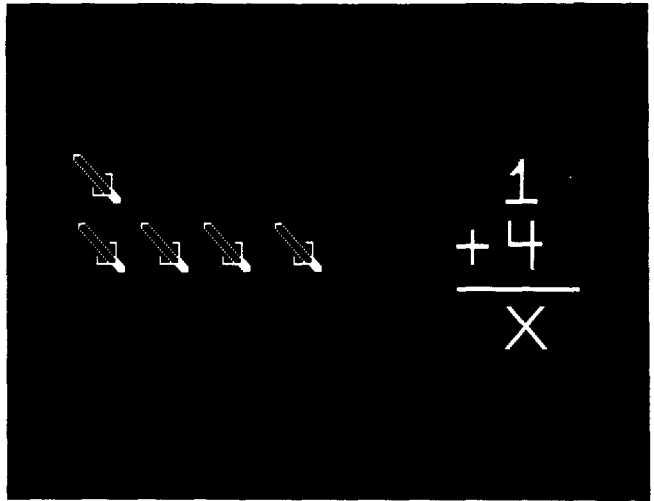
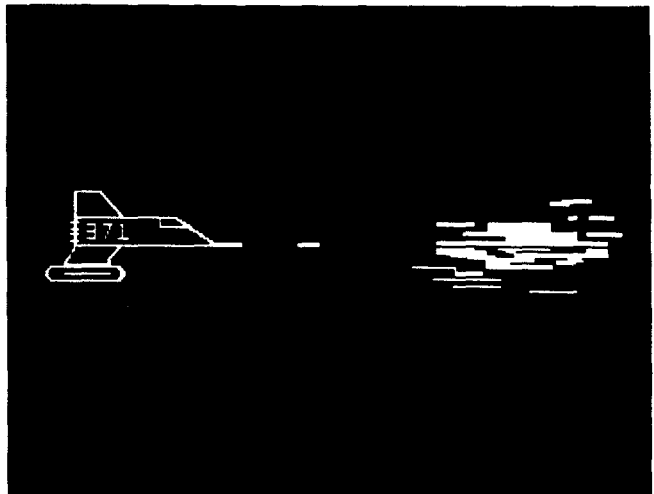$$\begin{array}{r} 5 \\ +4 \\ \hline 9 \end{array}$$

Examples of Screen Output

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Spaceship

If a response is incorrect, it's crossed out and replaced by an X. The student has a second chance for a correct response.

After three correct answers, the spaceship shoots at an enemy ship.

Examples of Screen Output

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Smile More

Counting Objects

Specific Topic:	Mathematics (Counting)
Type:	Drill and Practice
Reading Level:	Pre-reading
Grade Level:	Preschool–Grade 2

Description

Smile provides practice in counting objects. Several identical objects appear on the screen, with the number of objects randomly varying from one through nine. The numerals 10–20 are printed along the bottom of the screen. The student types in the numeral corresponding to the number of objects shown.

Objectives

• To count objects numbering ten through nineteen

• To identify the numeral that represents the number of objects

• To arrange a group of integer numbers in numerical order

Smile More

Nine problems are presented. The number of objects in each problem randomly varies from ten through twenty. The objects also randomly vary; for example, footballs, pigs, fish, hats, and several other objects are used.

A happy face indicates a correct response. If an incorrect response is given, that numeral is removed from the screen, and the student must try another response until the correct one is given.

Smile More

Use in an Instructional Setting

Preparation

Students should be able to recite the numbers ten through twenty in sequence. They should have some understanding of the one-to-one correspondence between objects and these numbers, and that this constitutes counting. They should also know that certain symbols (numerals) represent these numbers.

A student not familiar with the keyboard may need help finding the numeral keys.

Using the Program

Individual students can use this program with little or no direction from the teacher. It provides students—even very young children—with a pleasant, successful educational experience on the computer.

Smile More can be used to supplement or replace printed worksheets on counting as many as twenty objects. It can also provide varied examples for students needing additional practice in counting.

Follow-up

Students who have successfully completed this program could go on to the program Return of the Wuzzle, which provides practice in counting two different types of objects mixed together.

Smile More

Sample Runs

A group of objects is shown, along with the numbers 10–20. The student selects the numeral that indicates the total number of objects in the two groups.
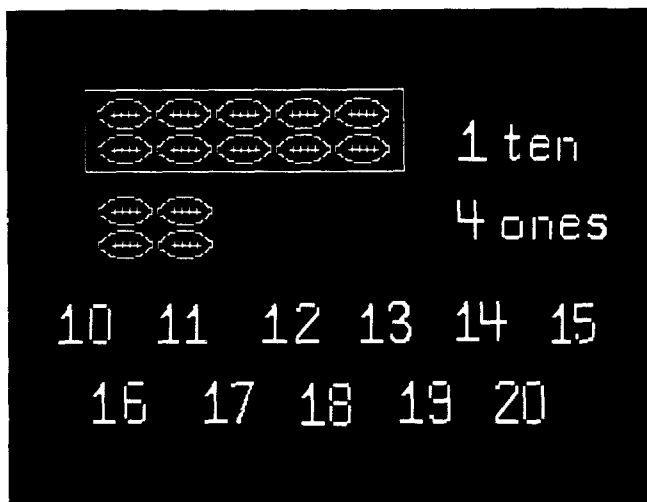
1 ten
4 ones

10 11 12 13 14 15
16 17 18 19 20

When the student enters the correct numeral, a smiling face and the numeral appear.
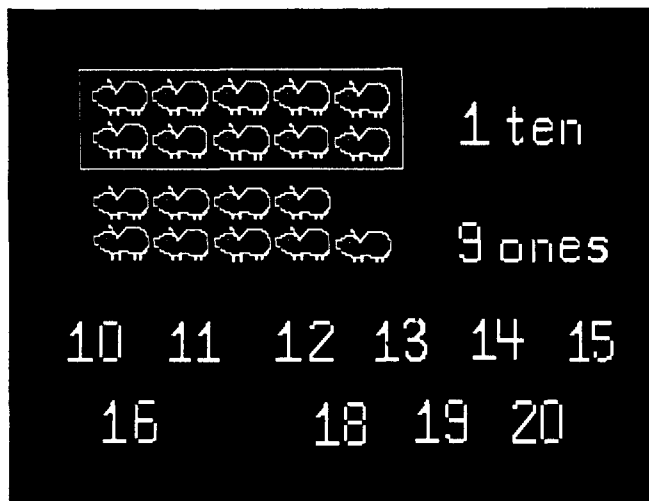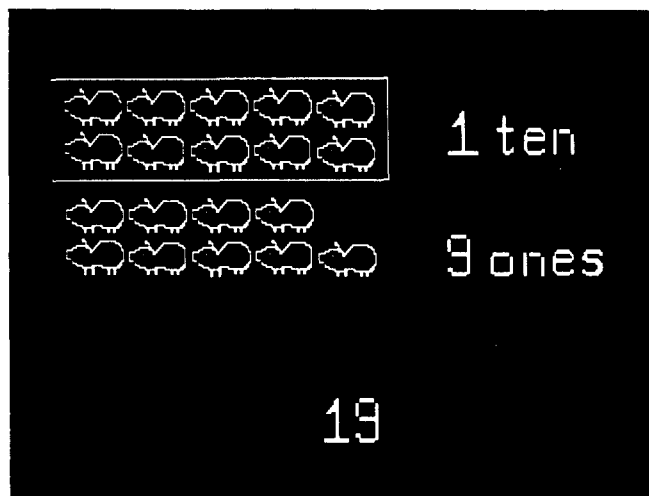
☺14

Examples of Screen Output

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Smile More

Sample Runs

When the student gives an incorrect response, that numeral is removed from the screen.

The student has nine chances to enter the correct numeral.

Examples of Screen Output

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Return of the Wuzzle

Counting Mixed Objects

Specific Topic: Mathematics
                       (Counting)

Type: Drill

Reading Level: Pre-reading

Grade Level: Preschool–Grade 2

Description

Return of the Wuzzle provides practice in counting objects in a group of mixed shapes. A number of two different kinds of objects—for example, tubes of toothpaste and televisions—appear on the screen. The question "How many _____ ?" (with the appropriate object shown) is printed at the bottom of the screen. The student then counts the objects and types in the corresponding numeral.

Objectives

- To count objects numbering ten through nineteen

- To identify the numeral that represents the number of objects

- To distinguish between two types of objects, counting only the one type requested

- To arrange a group of integer numbers in numerical order

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Return of the Wuzzle

The screen shows a group of two different kinds of objects. The numbers and objects are randomly chosen, with the total number varying from ten through twenty.

When the response is correct on the first try, the wuzzle appears in the lower corner of the screen and does a trick. But if the response isn't correct until the second try, the wuzzle simply appears, then disappears without doing a trick.

After an incorrect response, the student's answer is removed from the screen. After a second incorrect response, the student's answer is again removed from the screen and the other objects are erased from the screen, leaving only the objects to be counted. After a third error, the correct answer is flashed on the screen. Then a new problem is presented. In all, nine problems are presented, each with two separate responses. Each problem contains two questions requiring the student to count both sets of objects.

Return of the Wuzzle

In most cases, students should use the program Smile More before using Return of the Wuzzle.

Students should be able to recite the numbers ten through twenty in sequence and demonstrate a one-to-one correspondence between objects and those numbers—in other words, know how to count. They should be able to identify the numerals that represent these numbers by naming them and they should distinguish between two kinds of objects by pointing to those of one kind.

A student not familiar with the keyboard may need help finding the numeral keys.

A nonreading student should be told that the sentence "How many _____ ?" means to count the objects.

Using the Program

This program can be used by an individual student or by two students taking turns on each two-part question.
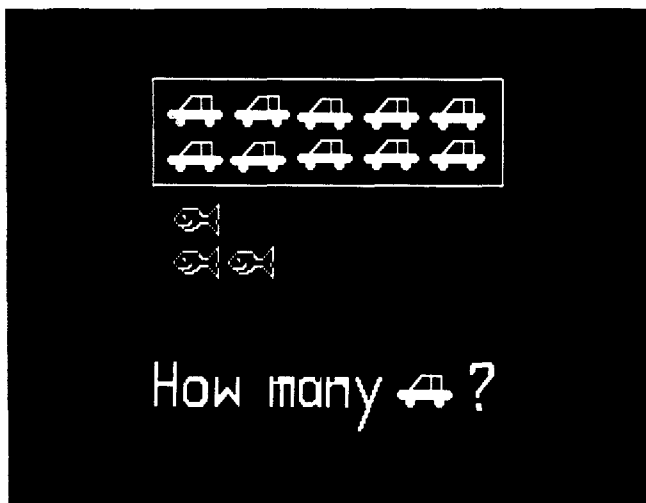
Follow-up

Students who have successfully completed this program could proceed to the program Saucer Shoot, which provides practice in adding groups of objects.

A student could make a drawing that shows several of each of three or four different shapes, and another student could then count each type of shape.
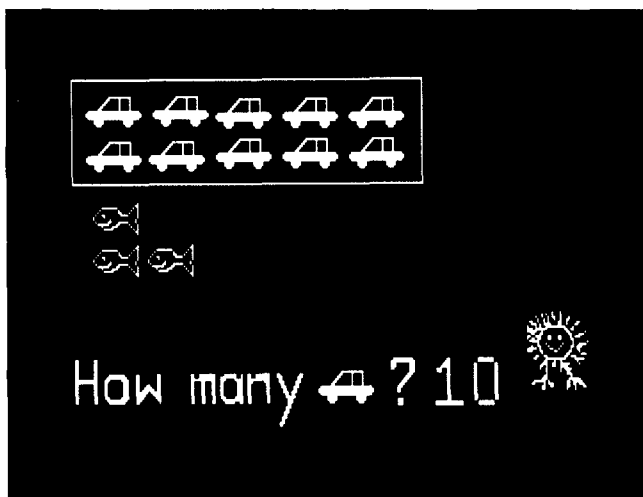
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Return of the Wuzzle

A group of two different kinds of objects is shown with the question "How many (one kind of object)?"

When a student enters the correct response, the wuzzle appears and does a trick.
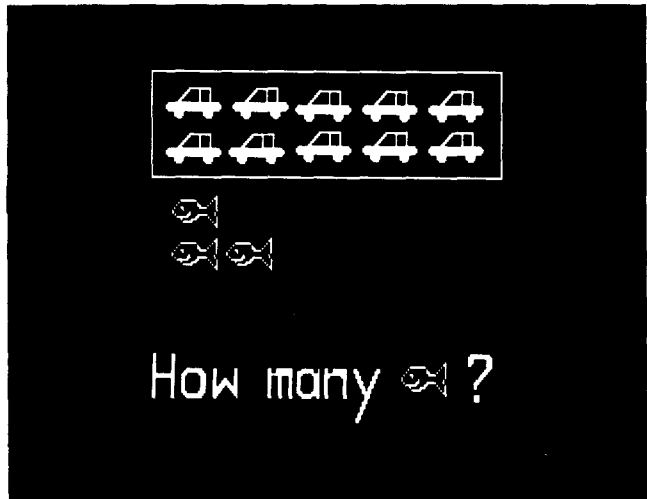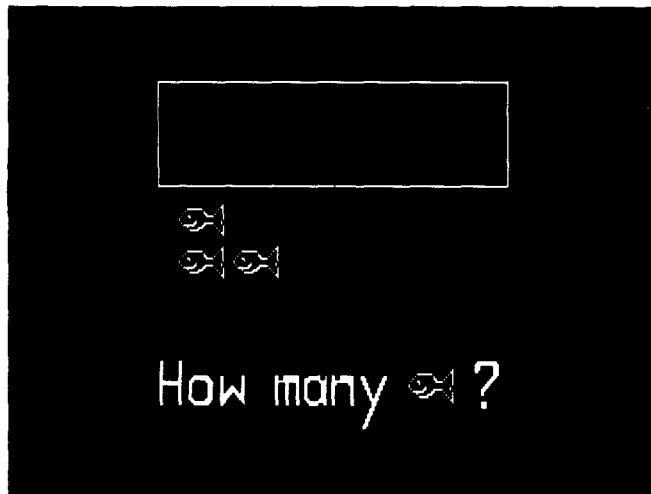
Examples of Screen Output

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Return of the Wuzzle

Sample
Runs

Then, as a second question, the student is asked to count the number of objects in the other group.

How many 🐟 ?

When the student gives an incorrect response, that response is removed from the screen. After the next wrong answer, the unneeded objects are erased.

How many 🐟 ?

Examples of Screen Output

Saucer Shoot

Adding Groups of Objects

Specific Topic: Mathematics
(Addition)

Type: Drill

Reading Level: Pre-reading

Grade Level: Kindergarten–
Grade 2

Description

In Saucer Shoot the student adds two groups of identical objects by counting the total number of objects.

Two sets of objects—the total of which is no greater than twenty—appear on the left side of the screen. The vertical addition problem appears on the right side of the screen with the addition sign.

Two question marks appear under the vertical addition problem. The student then enters the numeral that represents the total number of objects.

Saucer Shoot

Objectives

- To add two whole numbers by counting the total number of objects in each of two sets

- To identify the numeral that represents the number of objects

- To visualize the addition of two whole numbers by seeing two corresponding groups of objects together on the screen

- To become accustomed to working addition problems in both the vertical and horizontal formats

- To be able to recall the basic facts of addition

Saucer Shoot

Background Information	Nine problems are given. The objects are randomly chosen and include fish, planes, footballs, sailboats, and others.

After two question marks appear under the vertical addition problem, the student types in an answer. If the answer is incorrect, the incorrect numeral is crossed out and replaced by the question mark. The student tries the same problem again. After the second incorrect response, the correct answer is flashed on the screen in place of the question mark.

After three correct responses, the spaceship blasts an enemy ship. (Be sure the sound is turned on so the student can hear the rocket.)

Saucer Shoot

Use in an Instructional Setting

Preparation

In most cases, students should use the five preceding programs before using Saucer Shoot.

The student must be able to demonstrate the counting of like objects by identifying the numeral that corresponds to the number of objects. The student should understand the meaning of the addition sign, should be aware that the vertical and horizontal formats of addition problems are equivalent, and should understand the concept of a set of ten.

Using the Program

This program can best be used by individual students, proceeding at their own rates through the problems. Encourage students to count (rather than guess) the total number of objects (pointing to them or touching them as they count) and to think of the concept of a set of ten.

Saucer Shoot

Follow-up

Students could make up their own addition problems, drawing simple objects and writing the numerals to represent the number of objects. These could be exchanged, so that students solve each other's problems.

Give the students an addition problem in numerals—for example $10 + 2 = 12$—and ask them to draw a picture to represent this problem.

Give the students a number of objects—say, twelve—and ask them to draw as many different pictures as they can, showing twelve as several groups of objects.
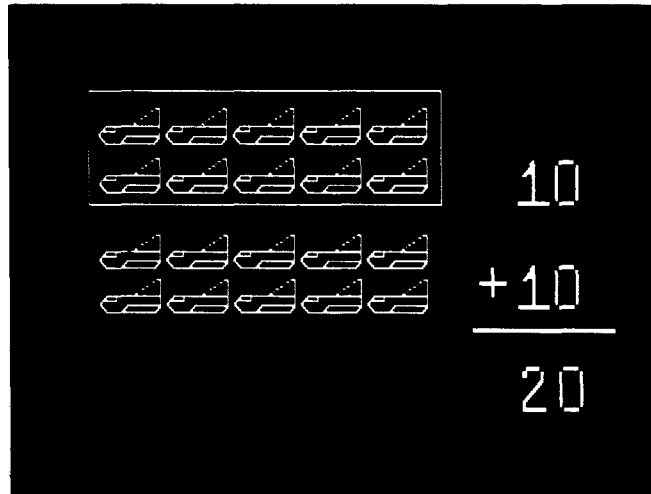
Saucer Shoot

A set of ten objects
and a second set of
objects with their
numerals appear on
the screen.
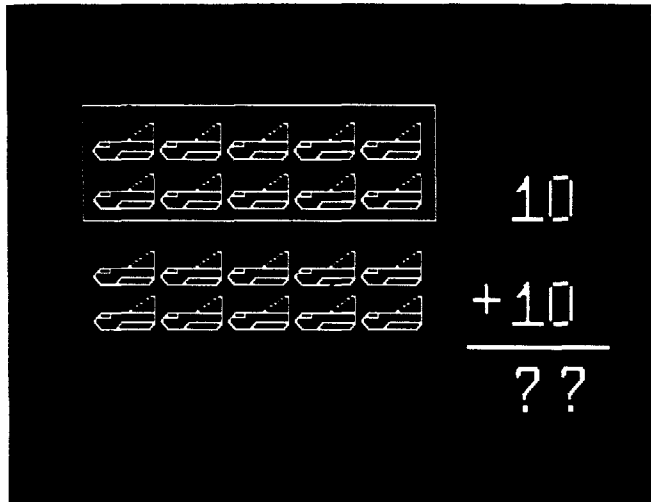
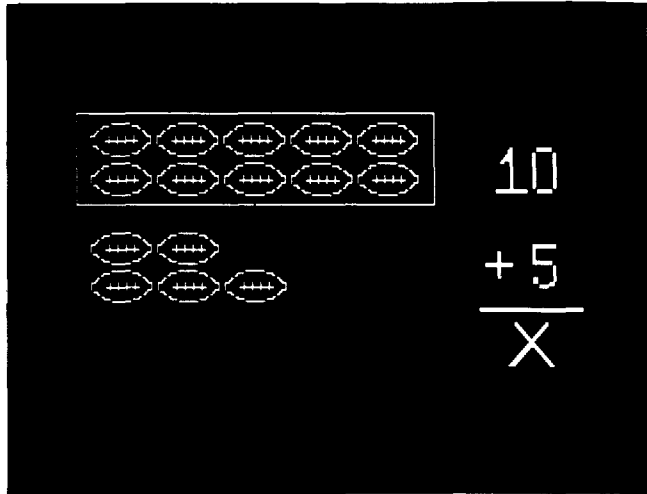After the student
makes a correct
response, the answer
is shown.
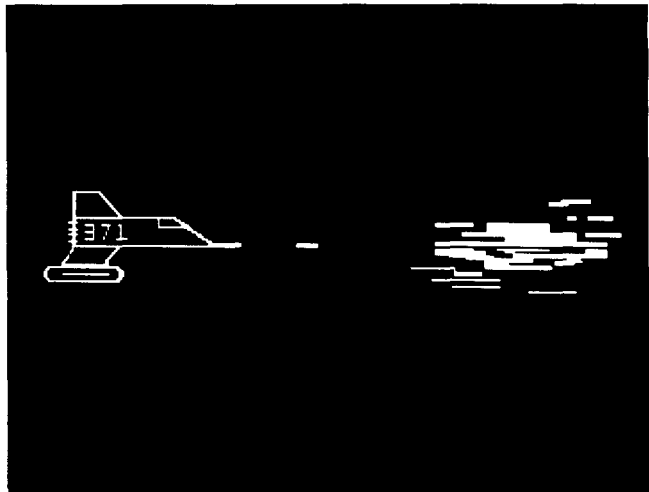
Examples of Screen Output

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Saucer Shoot

If a response is incorrect, it's crossed out and replaced by an X. After two incorrect responses, the correct answer is provided.

After two correct answers, the spaceship shoots at an enemy ship.

Examples of Screen Output

The ATARI Learning Systems Counting program was developed by the Minnesota Educational Computing Consortium. Smile was created and designed in an education class conducted by Dr. Curt Bring, Moorhead State University. Wuzzle and Space Ship were designed and created by Marge Kosel, Mike Fish, and Lois Edwards at MECC. Smilemore, Return of the Wuzzle, and Saucer Shoot are adaptations created by Doris Bower and Charles Erickson, both of MECC.

The adaptation of this manual was done by Doris Bower and the programming completed by Charles Erickson. Principal designers of the original material were Marge Kosel and Mike Fish, formally of MECC, and Lois Edwards, currently with MECC.

Every effort has been made to ensure the accuracy of the product documentation in this manual. However, because we are constantly improving and updating our computer software and hardware, Atari, Inc. is unable to guarantee the accuracy of printed material after the date of publication and disclaims liability for changes, errors or omissions.

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