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It is my hope that you find the file of use to you personally – I know that I would have liked to have found some of these files years ago – they would have saved me a lot of time !

Colin Hinson

In the village of Blunham, Bedfordshire.



# TEXAS INSTRUMENTS HOME COMPUTER

MILLIKEN MATH SEQUENCES:

## PERCENTS

EDUCATION

### SOLID STATE CARTRIDGE

A self-paced "tutor" which presents a variety of math problems involving percents. Suitable for children from grades 5 through 8.

*Convert the fractional expression to a percent*

$\frac{48}{100} = 48\%$

$\frac{64}{100} = 64\%$

$10\% \text{ of } \$8,000 = ?$

*Decimals to Percents*

$9.54\% = ?$

*Finding percentages of dollar values*

$31\% \text{ of } 41 = ?$

*Order of two percents*

$? \% \text{ of } 400 = 52$

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# Quick Reference Guide

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Note that the key sequences required to access special functions depend on the type of computer console you have. Important keystroke sequences are summarized here for your quick reference.

<i>TI-99/4</i> ENTER	<i>TI-99/4A</i> ENTER	Proceeds to next problem or continues problem after an incorrect answer has been given. Proceeds to the next step of a problem in the "Let Me Help You" feature. Also used to enter Beginning Level and Name.
SHIFT S (-)	FCTN S (-)	Allows you to correct typographical errors on the "Levels 1-15" screen before pressing ENTER.
PERIOD KEY (.)	PERIOD KEY (.)	Allows you to enter a decimal point where needed in answers to problems.
SPACE BAR	SPACE BAR	Tells the computer you want to choose either < or > as they alternately flash on the screen (Level 6 only).
A, B, C, D	A, B, C, D	Selects from four possible answers displayed on the screen (Levels 9-12, 14-15 only).
E	E	Tells the computer you want to quit ("exit") the work session or leave a particular level. Returns to the EXIT screen.
SHIFT Q (QUIT)	FCTN = (QUIT)	Returns to the master title screen.

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# ***Milliken Math Sequences: Percents***

This Solid State Cartridge is designed to be used with the Texas Instruments Home Computer. One in a series of twelve cartridges, it can help your child develop the strong math skills needed in today's and tomorrow's world. Suitable for children from grades five through eight.

Programmed by: John Plaster

Book developed and written by: Staff members of Texas Instruments Creative Communications.

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## A SAMPLE ACTIVITY

For easy use, directions are displayed on the screen throughout all the levels. This sample activity, however, can help to illustrate the way the program works.

### Let's Begin

When the Milliken title screen appears, press any key to begin. The screen then prompts you to enter the Beginning Level. Select any level from 1 to 15 by typing the number and then pressing **ENTER**. For this example, press **6** and **ENTER**. Next, the screen asks for Name. Type your child's name (up to ten letters long) and press **ENTER**.

Now a problem is displayed on the screen. The directions on the screen tell you to "PRESS SPACE BAR WHEN TRUE." Your child must determine which number is greater than the other.

A progress report appears across the bottom of the screen, with the following meanings:

PL	=	Problem Level
TC	=	Total Correct
TP	=	Total Problems
AVG	=	Average

As your child works through the problems, these figures are updated to report his or her progress. TC, TP, and AVG are automatically reset to zero at the beginning of each level.



## Entering Answers

Let your child answer a few problems as you observe. He or she simply presses the **SPACE BAR** when the appropriate symbol is displayed—greater than (>) or less than (<). Note: To enter answers on other levels, your child presses the correct number from the top row of keys. Use the Period Key (.) to enter decimal points.

## How the Computer Responds

If the problem is answered correctly, an animated picture appears. Your child then presses **ENTER** to continue to the next problem. If the problem is answered incorrectly, the computer returns a screen message and encourages your child to press **ENTER** to try again. If a second incorrect answer is given, the screen border turns red and flashes. To continue, your child presses **ENTER** again, and the computer gives the answer, with a message to “**STUDY THE ANSWER.**” When your child presses **ENTER** again, the next problem appears.

## Advancing or Moving Back

If your child answers five of the previous six problems correctly, a “Good News” report is displayed. He or she then advances to the next level. If three problems in a row are answered incorrectly, a “Bad News” report appears, and your child moves back one level.

## Changing Levels

You can change levels any time the question mark is flashing. To leave this level, simply press the letter **E** for “exit.” An “EXIT” screen appears, which reports on your child’s progress. Press **ENTER** to return to the title screen.

Let’s try another level. Press any key to go to the “Levels 1-15” screen. This time, enter **13** as the Beginning Level. Then type your child’s name again, and press **ENTER** to continue.

Problems at Level 13 involve finding percentages of dollar values that are multiples of 1000. A problem is displayed on the screen. A flashing question mark shows where the answer will go, and the directions on the screen tell your child to “**ENTER THE CORRECT NUMBER.**” Your child computes the problem mentally and enters the correct number.

### **“Let Me Help You”**

Now let's try the “Let Me Help You” feature. On the next problem, deliberately enter a wrong answer twice. When the border flashes red, press **ENTER** and the message “LET ME HELP YOU” is displayed. Keep pressing **ENTER** as the computer completes the problem step by step, until the final answer is found. Thus, if your child has difficulty with a particular problem, the computer demonstrates the solution. (*Note:* This feature is appropriate only in Levels 1-5, 7-8, and 13.)

Continue to observe as your child works through the problems and gains familiarity with the program's operations.



## SKILL LEVELS

This chart can help you find the appropriate starting level for your child. By looking at the sample problems and the skill description, select a level that is not too easy, but also not too difficult, for him or her. If in doubt, start at a lower level and work up from there.

Level	Sample Problem	Skill Description
1	$\frac{48}{100} = \underline{\quad ? \quad} \%$	Converting the fractional expression to a percent.
	$56\% = \frac{\underline{\quad ? \quad}}{100}$	Converting the percent expression to a fraction.
2	$.64 = \underline{\quad ? \quad} \%$	Converting the decimal to a percent.
	$24\% = \underline{\quad ? \quad}$	Converting the percent to a decimal.
3	$\frac{837}{100} = \underline{\quad ? \quad} \%$	Review of Levels 1 and 2.
	$414\% = \frac{\underline{\quad ? \quad}}{100}$	
4	$2.02 = \underline{\quad ? \quad} \%$	Additional review of Levels 1 and 2. Percents are from 1 through 999. Decimals are from .01 to 0.75.
	$11\% = \underline{\quad ? \quad}$	
5	$9.54\% = \underline{\quad ? \quad}$	Converting the percent to a decimal with percents from 1.01 to 9.75.
6	$291.3\% > 282.2\%$	Finding the order of two percents with percents from 1 through 999. 1 through 999.
7	$94\% \text{ of } 100 = \underline{\quad ? \quad}$	Determining percentages of 100.
8	$10\% \text{ of } 9.66 = \underline{\quad ? \quad}$	Review of Level 7. Finding 10% of various numbers from 1 through 9999.



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## TEXAS INSTRUMENTS HOME COMPUTER

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Level	Sample Problem	Skill Description
9	9% of 75 = <u>?</u>	Choosing the correct formula from the options given for the problem on the screen. Percents are from 1% through 20%; numbers range from 1 through 100.
10	3.1% of 13 = <u>?</u>	Choosing the correct formula from the options given for the problem on the screen. Percents are from 1% through 99%; numbers range from 1 through 999.
11	352% of 25 = <u>?</u>	Choosing the correct formula from the options given for the problem on the screen. Percents are from 101% through 500%; numbers range from 1 through 999.
12	317% of 41 = <u>?</u>	Review of Levels 9 through 11. Choosing the correct formula from the options given for the problem on the screen. Percents are from 1% through 500%; numbers range from 1 through 999.
13	10.2% of \$8,000 = <u>?</u>	Finding percentages of dollar values that are multiples of 1000. Mental computation required.
14	16% of <u>?</u> = 912	Choosing the correct formula from the options given for the problem on the screen. Percents are from 1% through 20%.
15	<u>?</u> % of 400 = 52	Choosing the correct formula from the options given for the problem on the screen.

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## CARING FOR THE CARTRIDGE

These cartridges are durable devices, but they should be handled with the same care you would give any other piece of electronic equipment. Keep the cartridge clean and dry, and don't touch the recessed contacts.

### CAUTION:

The contents of a Solid State Cartridge can be damaged by static electricity discharges.

Static electricity build-ups are more likely to occur when the natural humidity of the air is low (during winter or in areas with dry climates). To avoid damaging the cartridge, just touch any metal object (a doorknob, a desk lamp, etc.) before handling the cartridge.

If static electricity is a problem where you live, you may want to buy a special carpet treatment that reduces static build-up. These commercial preparations are usually available from local hardware and office supply stores.

## IN CASE OF DIFFICULTY

If the cartridge activities do not appear to be operating properly, return to the master title screen by pressing **QUIT**. Withdraw the cartridge, align it with the cartridge opening, and reinsert it carefully. Then press any key to make the master selection screen appear. (*Note:* In some instances, it may be necessary to turn the computer off, wait several seconds, and then turn it on again.)

If the cartridge is accidentally removed from the slot while the cartridge contents are being used, the computer may behave erratically. To restore the computer to normal operation, turn the computer console off, and wait a few seconds. Then, reinsert the cartridge, and turn the computer on again.

If you have any difficulty with your computer or cartridge, please contact the dealer from whom you purchased the unit and/or cartridge for service directions.

Additional information concerning use and service can be found in your *User's Reference Guide*.

Texas Instruments invented the integrated circuit,  
the microprocessor, and the microcomputer.  
Being first is our tradition.



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