



Scott, Foresman  
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SCOTT, FORESMAN

# NUMBER BOWLING

Practice in  
Decimals and  
Fractions

Ages 11 and up



MATHEMATICS ACTION GAME SERIES

For the TI 99/4A microcomputer.



Scott, Foresman

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# Number Bowling

Practice in decimals and fractions

Mathematics Action Games series for use with  
the Texas Instruments 99/4A microcomputer.

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## About the Module

Scott, Foresman and Company, one of the country's leading educational publishers, carefully developed *Number Bowling* to create a unique blend of fun and learning. *Number Bowling's* three challenging levels provide hours of enjoyment while providing practice in decimals and fractions skills. This solid state module requires only your Texas Instruments Home Computer and monitor or television set.

Decimals and fractions, which generally are taught in the upper elementary grades and in junior high school, can be perplexing for both children and adults. *Number Bowling*, with its animation and sound effects, motivates players to spend hours practicing these vital math skills. The chart on the next page details the skills covered in this module.

Although directions for *Number Bowling* are included in the module, detailed game instructions are printed on pages six to nine in this User's Guide. Players can view the instructions in the module at any time during play by pressing the FCTN and the AID keys simultaneously. Please note that *Number Bowling* is not scored like "real" bowling. Each frame is scored as a single unit with a high value of 10 points per frame, for a maximum total of 100 points per game.

Although the decimals and fractions skills in *Number Bowling* are usually taught in sixth, seventh, and eighth grades, younger children with good math skills as well as older children and adults will enjoy the game's challenges and rewards.

*Number Bowling* is one of a series of mathematics games designed to supplement mathematics instruction in a variety of skills and at a variety of levels. Enjoy playing *Number Bowling*!

## Difficulty Levels

### Number Bowling Decimals and Fractions

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#### Amateur Level

A. Which is greater?

3.0254 or 3.3025      3.3025

B. Give as a decimal.

fifty-one ten thousandths      0.0051

#### Pro Level

A. Give as a fraction.

$6\frac{3}{4}$        $\frac{27}{4}$

B. Give as a mixed number.

$\frac{23}{5}$        $4\frac{3}{5}$

#### Champion Level

A. Give as a decimal.

$\frac{561}{1000}$       0.561

B. Give as a decimal.

$\frac{1}{2}$       0.5

# Number Bowling Game Description

## Object

The object of *Number Bowling*, for both the one-player and the two-player formats, is to score points by answering problems correctly. The faster you enter each correct answer, the higher your score. The game ends when you complete ten frames. At the end of a one-player game, the module displays your total score. At the end of a two-player game, the module proclaims the high scorer as the game's winner.

## Getting Started

To begin *Number Bowling*, press 2 from the selection list at the beginning of the module.

```
TEXAS INSTRUMENTS
HOME COMPUTER

PRESS
1 FOR TI BASIC
2 FOR NUMBER BOWLING
```

After the game's title sequence, select your difficulty level by pressing 1 for Amateur, 2 for Pro, or 3 for Champion. The module then asks how many players will be playing this match. Type 1 for one player, or type 2 for two players. After you type the number, press ENTER.

Enter your name(s). In a one-player game, the computer asks for only one name. The computer accepts names that are ten letters or shorter. If your name is longer than ten letters, use a shortened form of your name. Be sure to press ENTER after you type your name.

```
Type your name .
Use up to ten letters .
Then press ENTER .

Player 1 : Karen
Player 2 : Carlos
```

After you enter your name(s), you can choose whether or not to view the instructions for the game. If you type Y and press the ENTER key, the module displays a series of instruction screens. If you type N and press ENTER, the game begins.

```
Do you want
instructions? 
Press Y for yes .
Press N for no .
Then press ENTER .
```

## Play

Your turn begins when your name appears on the screen. As soon as a problem appears, a musical tone sounds, the cursor flashes, and the timer begins. Type your answer in as little time as possible, and then press ENTER. The timer stops automatically. You must press ENTER after typing the answer. The computer neither recognizes the answer nor stops the timer until you press ENTER. Your point total for that frame is determined by the number of seconds recorded on the timer. (See the section on Scoring.)

When you enter the correct answer, a special musical tone sounds, the timer stops, and your answer flashes on the screen. The bowling ball then rolls down the alley and

knocks down the appropriate number of pins. Your score for that frame is displayed on the scorecard.

When you type an incorrect answer, the module beeps, the timer stops momentarily, and the message "Try again" appears. The timer continues while you attempt to type the correct answer. If your second attempt is incorrect, the module beeps, the timer stops, and the module displays the correct answer. You receive zero points for that frame.

### Scoring

Points are awarded according to the speed of your correct response. The number of seconds recorded on the timer determines the number of points you earn for that frame. For example, if you correctly answer a problem in six seconds, your ball hits eight pins and you earn eight points (see the table below). When you enter an incorrect answer to a problem, you get a second chance to enter the correct answer. If your second answer is correct, the number of points you earn for that frame is determined by the total number of seconds that you used to enter both answers. If, for example, you correctly answer a problem on your second attempt and the timer has recorded a total of 12 seconds for both attempts, you earn five points for that frame (see the table below). You receive points for correct answers only. If your second answer is incorrect, or if you do not enter the correct answer within one minute, you receive zero points for that frame. If you fail to press any valid key within 20 seconds, the computer sounds a series of beeps to remind you to respond. If you still have not pressed a valid key after 10 additional seconds, the computer displays the correct answer. You get zero points for that frame. Points are awarded as shown in the table below.

Time	Points
1-2 seconds	10
3-4 seconds	9
5-6 seconds	8
7-8 seconds	7
9-10 seconds	6
10-60 seconds	5
over 1 minute	0

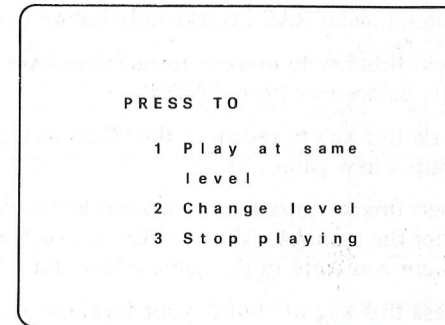
### Ending the Game

At the end of ten frames, your total score is displayed. In two-player games, the module declares the high scorer as the winner. In one-player games, the module responds to high scores with corresponding reward messages. The list of messages is as follows:

Score	Message
70-79	Good work!
80-89	Join the pro tour!
90-99	You're an all star!
100	Perfect game!

### Playing Another Game

When you end a game of *Number Bowling*, the following screen appears.



If you press 1, another *Number Bowling* game begins. That game uses the same difficulty level as the game you just played. If you press 2, the "Choose a Level" screen appears. You can then choose to play *Number Bowling* at a different level. Press 3 when you are finished playing *Number Bowling*.

## Keyboard Guide

Special key functions programmed into *Number Bowling* make the game more convenient to play. To enact one of the functions listed below, hold down the FCTN key and simultaneously press the desired function.

Function	Action
ENTER	Press this key during a game after you type an answer. The computer then checks your answer.  Press this key to continue to the next screen.  Press this key to proceed quickly through the series and module title screens.
FCTN 3 (ERASE)	Press this key to erase the part of your answer that you entered last. ERASE works only before you press ENTER.
FCTN 4 (CLEAR)	Press this key to erase your entire answer. CLEAR works only before you press ENTER.
FCTN 5 (BEGIN)	Press this key to return to the "Choose a Level" screen to begin a new game.
FCTN 7 (AID)	Press this key any time you want to see the instructions. After the computer displays the instructions, it returns to where you were in the game when you pressed AID.
FCTN 8 (REDO)	Press this key to "redo" your level choice. The computer returns to the "Choose a Level" menu.
FCTN = (QUIT)	Press this key to return to the master title screen to end work on the module.
FCTN S or D ← →	Press the ← and → arrow keys to correct any typing errors you make while typing your name.

## Scorecard

Players can use this scorecard to record the highest scores achieved at each level of *Number Bowling*.

### Amateur Level

Name	Date	Score

### Pro Level

Name	Date	Score

### Champion Level

Name	Date	Score

## Related Activities

You can use the following activities to expand interest in *Number Bowling* into other related areas.

1. Players write their *Number Bowling* scores as fractions of perfect scores and then convert the fractions to their decimal equivalents:  $64/100 = 0.64$
2. Players determine their improvement in *Number Bowling* scores from game one to game ten, game ten to game twenty, etc., and then express the improvement as a percent:

Game 1	58 points
Game 10	72 points
Difference between games	$72 - 58 = 14$
Improvement as a percent	$14 = \frac{\quad}{\quad}\%$ of 58
or	$14/58 = 0.241 = 24.1\%$

3. Players go to a bowling alley, bowl some games, and learn to score an actual game of bowling.
4. Players can keep track of their *Number Bowling* times for a specific level. For each three-game set, they average their scores, record the averages, and then plot the averages on a graph.
5. Each player can compile a personal dictionary of computer terms.
6. Organize groups in an ongoing tournament for *Number Bowling*. You can use the scorecard on page 11 to record the best times for each level.

## The Mathematics Action Games Series

Scott, Foresman has prepared a series of game modules for the Texas Instruments Home Computer. These modules provide practice in a variety of important mathematics skills that are taught in grades one through eight.

These colorful and animated games encompass a wide range of themes and include both competitive and non-competitive formats. Each game in the series has several difficulty levels. The series includes:

Ages 5-8

### Frog Jump

Putting numbers in order

### Picture Parts

Basic addition, subtraction, and multiplication

Ages 8-12

### Pyramid Puzzler

Multiplication facts and multiplication by 100 and 1000

### Star Maze

Division facts, division with remainders, and short division

Ages

### Number Bowling

11-Adult

Decimals and fractions

### Space Journey

Percent



## Caring for the Module

Although the module is durable, handle it carefully. Keep it clean and dry, and avoid touching the recessed contacts.

Caution: The contents of a module can be damaged by static electricity discharges. Static electricity build-ups are likely to occur when the natural humidity is low (during winter or in areas with dry climates). To avoid damaging the module, touch any metal object (a doorknob, a desk lamp, etc.) before handling the module. Commercial preparations that reduce static build-up in carpets are available at hardware and office supply stores.

### In Case of Difficulty

Technical information about the Texas Instruments Home Computer and the modules can be found in the *User's Reference Guide*. You can solve several of the more common problems by reviewing the solutions listed below.

1. **Problem:** Everything is plugged in and yet nothing appears on the monitor.

**Solution:** Check to see that the switch on the front of the keyboard is pushed to the right and that the red light is on.

2. **Problem:** The module is not operating properly.

**Solution:** Press QUIT (FCTN =) to return to the master title screen. Remove the module, align it with the module opening, and carefully reinsert it. Press any key to make the title screen appear. In some instances, you may have to turn the computer off, wait several seconds, and then turn it on again.

3. **Problem:** The computer is behaving erratically because someone removed the module from the computer while it was being used.

**Solution:** Turn the computer console off, wait a few seconds, reinsert the module, and turn on the console. The computer should return to its normal operation.

## Software Media Limited Warranty

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This warranty covers the case components of the software package. The components include all cassette tapes, diskettes, plastics, containers, and all other hardware contained in this software package ("the Hardware"). This limited warranty does not extend to the programs contained in the software media and in the accompanying book materials ("the Programs").

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### Performance by Scott, Foresman Under Warranty

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