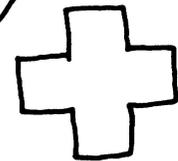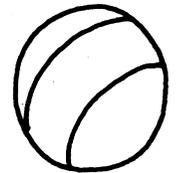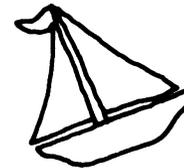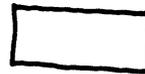# STICKYBEAR MATH

PARENT GUIDE

STICKYBEAR MATH

Parent Guide

STICKYBEAR MATH
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Additional Graphics by
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What's Inside

What Is Stickybear Math?

The Stickybear Math program is designed to provide focused drill and practice in basic addition and subtraction skills for children ages six through nine.

The program adjusts automatically to meet the individual needs of each user. A level adjustment that the child never sees constantly monitors progress and adjusts up or down accordingly. This allows each child to proceed at a comfortable pace, challenged but not frustrated.

Parents and teachers can further tailor the program to meet each child's needs. The Parent Option section of this Guide gives step-by-step directions on how to assign the level and type of problem to be presented.

Children help the Stickybear family to overcome obstacles in a series of colorful adventures by solving problems correctly. The desire to view the next adventure is a powerful incentive to continue solving problems.

Problems at the lower levels are enhanced by animated groups of objects that help with counting skills.

As an aid to group management, the program keeps track of the names, levels reached, scores, and types of problems assigned for up to 25 children. Names may be added or dropped at any time. All instructions and answers are entered via the keyboard.

The colorful Stickybear Family poster included will brighten any computer corner. The set of Stickybear stickers are pure fun!
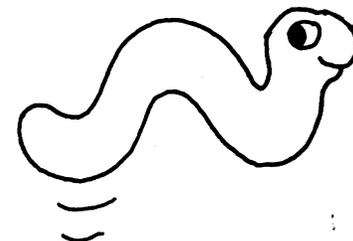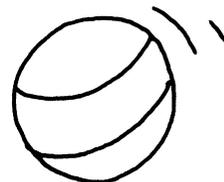
Learning With Stickybear Math

Addition and Subtraction   Stickybear Math provides enjoyable drill and practice in basic addition and subtraction. The program uses advanced learning technology by automatically adjusting the problem difficulty to each child's success rate. If a child is answering the problems correctly, the program will increase the level of difficulty while still presenting some problems at the current level for reinforcement.

When enough trial problems from the next level have been answered correctly, the program will move to that higher level. On the other hand, the program will move to the next lower level if the child is unsuccessful at the current one. The internal monitor moves the level scale unbeknown to the user. The child is not aware that the program is adjusting accurately to his own level and subtly raising that level by focusing on areas that need improvement.

Checking the child's progress with the Report Card option will point out areas of special instructional need. Parents and teachers can adjust the type and nature of the problems to fine-tune the program for each child. The result is more math and less frustration.

Exploration and Discovery   Young children are natural scientists. They love to observe, experiment, and explore. Stickybear Math is designed to stimulate these young explorers. They can use the program themselves after a little coaching on cursor movement and ending the session. They can explore the program and enjoy the adventures of the Stickybear family while building math skills.

Family Fun   Stickybear Math's hi-resolution graphics, animated objects, funny sounds, and interesting adventures combine to provide endless entertainment. Even older children (and adults) who have already mastered basic addition and subtraction will enjoy playing Stickybear Math.

How To Use Stickybear Math

To Begin

Stickybear Math will run on any Apple, Apple II, Apple II Plus, Apple //e or Apple //c with at least 48k and a disk drive.

If you have an Apple //e or Apple //c, make sure the CAPS LOCK key is down.

To start, put the program disk into the drive and turn on your Apple. If you have Autostart, you will see the title panel displayed.

If your Apple does not have the Autostart ROM, you will see the monitor cursor *, Type 6 then type P while holding down the key marked CTRL (6 CTRL P), then press the RETURN key.

After the title panel, you will see the credits, then:
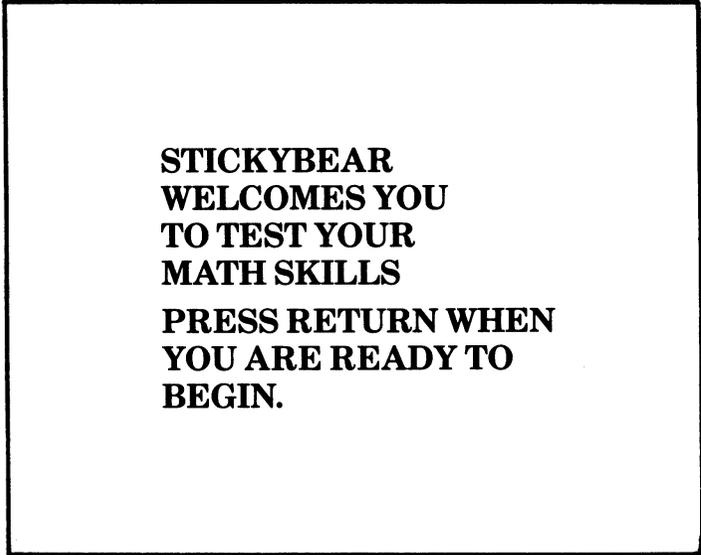
**STICKYBEAR
WELCOMES YOU
TO TEST YOUR
MATH SKILLS**

**PRESS RETURN WHEN
YOU ARE READY TO
BEGIN.**

The welcome panel is the only position from which parents and teachers can enter the option sections. There are three choices from the welcome panel: Two of them allow parents to view and adjust the program; the third allows the child to play.

Control C (CTRL C) Parent Option
Press Control while pressing C (CTRL C) to enter the Parent Option section, described below.

Control R (CTRL R) Report Card
Press Control while pressing R (CTRL R) to enter the Report Card section, described below.

RETURN
Press the RETURN key while in the welcome screen to begin playing Stickybear Math without making any new changes to the type and level of problems to be presented. Any previous changes will, of course, remain intact.

To Play

If you pressed RETURN when the welcome panel was on screen, you will be asked to enter a name (no more than 11 letters, please) and press RETURN.
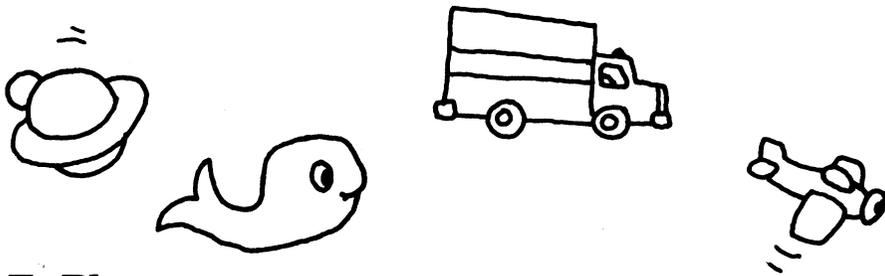
Note: Children with the same first name should add a last initial so the program can tell them apart.

If the name is not on the program's list of previous players, the problems will start at level 1, with all options on, and will progress upward as the child succeeds.

If the name was entered earlier, the program will start at the last level reached and with the variations (if any) set in the Parent Option section.

If you decide to skip the Parent Option section, Stickybear Math will automatically present a mix of all available types of problems.

Stickybear Math will now present a series of problems that the child may solve by typing in the correct numbers (see Cursor Movement) and RETURN. Each correct answer will earn objects toward the solution of the Stickybear adventure on screen. For example, Stickybear must earn balloons to help him fly over a brick wall or turtles to hop over a pond.

Control Z (CTRL Z) End the Session
After the child has finished playing Stickybear Math, the session can be ended and the results saved to the disk by pressing the Control key while pressing Z key (CTRL Z). Note: Control Z can be used only when a new problem is on the screen, before it has been answered.

Control Q (CTRL Q) Quiet
Press the Control key while pressing the Q key (CTRL Q) to turn off the sound for quiet play. Apple //c users can simply turn down the adjustment knob located on the left side of the machine.
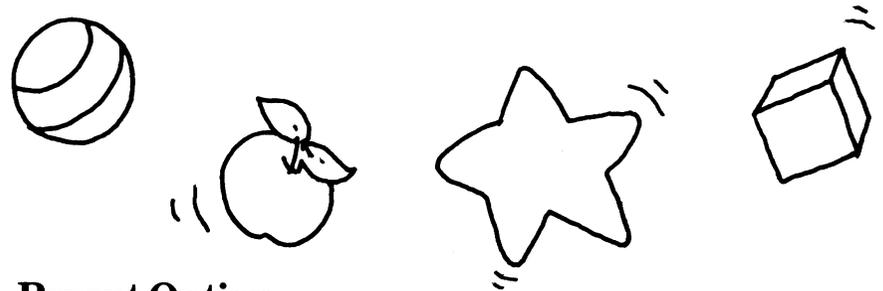
Parent Option

If you pressed Control C (CTRL C) while the welcome panel was on screen, you are now in the Parent Option section. This section allows you to determine the type and level of problems presented to each child. You can make individual assignments, then store them on the disk for up to 24 children (the 25th name is always reserved for any new child not on the list). When the family, neighborhood, or class plays Stickybear Math, each child will be presented with the type and level of problems you chose for that individual.

You will see:

```
  YOU CAN CUSTOMIZE
  THE STICKYBEAR
  EARLY MATH
  PROGRAM FOR EACH
  CHILD.
  _____

  PRESS RETURN TO GO
  ON OR ESC TO GO
  BACK TO THE START
  OF THE PROGRAM.
```

Press RETURN to continue. You will see:

```
  ENTER THE
  CHILD'S NAME:
  _ _ _ _ _ _ _ _ _ _ _

  PRESS RETURN TO
  GO ON
```

Type the child's name (11 or fewer letters), then press RETURN. The Parent Option section will present you with eight choices to make. Press the appropriate number or answer yes (Y) or no (N) to identify your response, then press RETURN. You will be able to review and revise your selections after the eighth choice.

The options are these:

1. SELECT THE NUMBER OF TRIES. Enter a number from 1 to 4 to specify how many incorrect answers the program will accept before the computer displays the correct answer and registers a missed answer on the progress report. The program default for this choice is 2. Younger children will feel comfortable with more tries. Set the option to 1 try for more accomplished math wizards or for a quiz form with accurate per-problem scoring.

2. SELECT THE LEVEL OF DIFFICULTY. Enter a number from 1 to 20 to select the level of difficulty at which the program will begin for this child. Remember, Stickybear Math will adjust itself up or down as the child solves the problems. See the Table of Levels for a description of the problems presented at each level and the skills involved.

3. ADDITION. Type Y to include addition problems. Press N to have only subtraction problems presented.

4. SUBTRACTION. You may select either addition or subtraction or both. You must choose at least one. Type Y or N.

5. MISSING ADDENDS. You may choose to include problems that require the child to fill in the missing middle of a problem $(3 + \quad = 12)$. Type Y or N.

6. COLUMN ADDITION. Problems presented in this fashion are somewhat more difficult for younger children. Type Y or N.

$$\begin{array}{r} 3 \\ +12 \\ \hline \end{array}$$

7. COLUMN SUBTRACTION. Problems presented in this fashion do not occur until Level 4. Type Y or N.

$$\begin{array}{r} 5 \\ -2 \\ \hline \end{array}$$

8. MULTIPLE ADDENDS. Problems of this type $(3 + 4 + 1 = \quad)$ are not presented until Level 10. Type Y or N.

When you have completed the eighth choice, you will be shown a review screen. Type the number of any option you wish to revise or press RETURN to accept the choices as made and return to the welcome panel.

You may press Control C (CTRL C) to customize the program for another child. The Parent Options can be changed as often as desired to increase variety and maintain interest.

Report Card

Press Control while pressing R (CTRL R) while the welcome panel is on screen to get the Report Card section. The Report Card enables you to track and store the individual assignments and progress reports for up to 24 children (position 25 is wiped out whenever a new and unlisted child plays).

You will see:

```
REPORT CARD OPTION
CHOOSE:
1. SINGLE CHILD'S
   REPORT CARD
2. DELETE A
   CHILD'S RECORD
3. VIEW OPTIONS
PRESS ESC TO GO
BACK TO THE START
OF THE PROGRAM.
```

Press a number from 1 to 3 to select an option, or press ESC to return to the welcome screen.

Option 1 presents a list of the children whose names are stored on the disk and allows you to view the result of the last session for any child. Select the number of the child whose record you wish to review.

The progress report screen contains a variety of information.

```
PROGRESS REPORT
FOR: SUZANNE
   START LEVEL = 01
   CURRENT
   LEVEL       = 02



   PROBLEMS: 026
   CORRECT: 024

   SCORE: 092%
```

The child's name appears here.

Level at which the problems began. Level reached at last session. The spread gives an indication of the child's progress. Current level will be the starting level for the next session.

The number of problems attempted. Correct answers within the number of tries allowed.

Percent of correct answers.

Note: This information, which describes only the preceding session's results, is updated each time the child plays with the program.

Option 2 allows you to delete any records you wish, in order to make room on the list. Enter the child's name you wish to delete when the list appears.

Option 3 allows you to review and change the Parent Options for any child whose name appears on the list. Select the number of the child whose options you wish to revise. When the Parent Option review screen appears, select the number of the option you wish to change.

IMPORTANT: The Report Card section will store information from one session to the next ONLY if the Control Z (CTRL Z) command was used by the child to end the session. When children play Stickybear Math at a later date, the stored information will be read by the computer. As long as names are entered the same way each time, the program will start at the appropriate level and with all selected Parent Options intact.

Cursor Movement

Math facts are problems that involve the numbers 0 through 9 and have answers of 18 or less. Children are taught to answer math-fact problems from left to right. For example, the problem $9 + 6 = \_$ would be answered by typing 1 then 5.

Stickybear Math presents the cursor on math-fact problems at the leftmost position so the problem may be answered naturally:

$9 + 6 = \_$
$9 + 6 = 1\_$
$9 + 6 = 15$

All other problems start with the cursor in the rightmost position in the way that such problems are taught:

$12 + 9 = \_$
$12 + 9 = \_1$
$12 + 9 = 21$

The cursor may be moved from left to right, using the arrow keys. To change an answer, use the arrow keys to position the cursor over the number to be changed. Type in the new number, check it, then press RETURN.

Instructions for Children

If you want children to load the disk themselves, explain each step carefully. Demonstrate the procedure for the first session or two. Have children tell you the next step.

Have children practice the procedure several times under your supervision. Be sure to demonstrate how to hold the disk. Stress the importance of being careful. The disk should be held only by the end with the picture. It should not be bent or folded. Remember to show how to put the disk away after each session.

Remind children to make sure they enter two-digit answers in the correct order and use the Control Z (CTRL Z) command to end each session in order to save the Report Card information.

Learning the Program

Children learn best by experimenting themselves. Try to resist that almost overwhelming impulse to intervene in the discovery process. You can have your turn later!

As mentioned earlier, most children should need only a little coaching on cursor movement and ending the program. If more assistance is needed, try phrasing your suggestion in question form. If children hesitate, ask, "What do you think will happen if you press this arrow key?" By making suggestions in question form, you allow children to stay in control.

Children often experiment with the program in ways difficult for adults to understand. Some children may appear to be randomly pressing keys when they are actually testing the "rule" that some keys produce no effect. Some children like to watch the same display much longer than most adults would. Others press the keys too quickly for the computer to register. Try not to impose "adult" order on children's experimentation. You might interrupt the learning process.

Additional Activities

After children have fully explored Stickybear Math several times, you might want to try a few more structured activities.

Count the Objects. Ask children to count the objects in the picture displays before and after they solve the problems. Stick to the lower numbers. The moving objects may be difficult for even some adults to count. Adding and subtracting real objects may help children who are having trouble with these concepts.

Flash Cards. Stickybear Math makes a wonderfully adaptive flash-card deck. Children can focus on a particular skill or level by means of the Parent Option. Even as children become more proficient at the upper levels, reducing the number of tries allowed helps maintain motivation and encourages answer-checking. Older children may also enjoy timing themselves, each other, and adults to see who can flash fastest.

Math Is Everywhere. After children have become familiar with the concepts of addition and subtraction, look for examples in their environment. "We had 12 eggs in the carton. How many are there now?"

Some children will enjoy these activities immediately. Others will prefer to continue exploring Stickybear Math on their own. Be patient. Introduce activities in small doses. For younger children, adding and subtracting five or six problems at a session may be enough.

Remember, the Stickybear Math program was designed for children from ages six through nine. Younger children have a shorter attention span and different interest levels than older children.

Stickybear Math gives children an introduction to computers, encourages their sense of exploration and discovery, reinforces the skills of addition and subtraction, and is a lot of fun!

Table of Levels

This table illustrates the order in which the problem-difficulty levels are presented. Children do not see the levels, as the program adjusts itself automatically.

You can use the table to select the starting place for a particular child or session. The highest level reached in each session is displayed in the progress report. Check the table to see which skills have been mastered so far and which should be emphasized in future Parent Option assignments.

If no other level has been set via the Parent Option section, the program begins at level 1. This may cause older children to lose interest.

Note: Some of the options at each level may be deselected via the Parent Option section.

LEVEL

ADDITION

1. Addition with animated objects shown, sums to 5, horizontal and vertical presentation.

2. Single-digit addition, numbers less than 10, horizontal and vertical presentation.

3. Single-digit addition, missing addends, numbers less than 10, horizontal presentation.

SUBTRACTION

4. Subtraction with animated objects shown, numbers less than 5, horizontal and vertical presentation.

5. Single-digit subtraction, numbers less than 10, horizontal and vertical presentation.

6. Single-digit subtraction, missing addends, numbers less than 10, horizontal presentation.

ADDITION AND SUBTRACTION

7. Addition and subtraction, no objects shown, numbers less than 10, horizontal and vertical presentation.

8. Addition, numbers through 18, horizontal and vertical presentation.

9. Subtraction, numbers through 18, horizontal and vertical presentation.

10. Three addends, horizontal presentation.

11. Mixed addition and subtraction, numbers through 18, horizontal and vertical presentation.

TWO-PLACE ADDITION AND SUBTRACTION

12. Two-place addition, without carry, vertical presentation.

13. Two-place subtraction, without borrow, vertical presentation.

14. Two-place addition, without carry, missing addend, horizontal presentation.

15. Two-place subtraction, without borrow, missing subtrahend, horizontal presentation.

16. Two-place addition with carry, vertical presentation.

17. Two-place subtraction with borrow, vertical presentation.

18. Two-place addition with carry, missing addend, horizontal presentation.

19. Two-place subtraction with borrow, missing subtrahend, horizontal presentation.

THREE-AND FOUR-PLACE ADDITION AND SUBTRACTION

20. Section 20 presents the following types of problems, depending on the options chosen:

Three-place addition and subtraction, without carry or borrow, vertical presentation.

Three-place addition with carry, vertical presentation.

Four-place addition with multiple carry, vertical presentation.

Three-place subtraction with borrow, vertical presentation.

LIST OF COMMANDS

CTRL C	To Parent Option from welcome screen.
CTRL R	To Report Card from welcome screen.
RETURN	To start playing from welcome screen.
CTRL Z	To end a session and record score.
CTRL Q	To turn off sound.