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"MATH WHIZ" Software Module
Version 2.0
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The "Math Whiz" software module allows RB5X(tm) to quiz children in the elementary math skills of addition, subtraction, Multiplication (up through 12 times 12), and division. There are eight distinct skill levels available. Depending on the level selected, RB5X limits the size of. the numbers used in the answers.

"Math Whiz" Is a math quiz in a game format. The game's challenge and the lights, sounds, and robot motions that accompany the game motivate children to learn important math facts. Up to eight individuals can play "Math Whiz" at one time.

Equipment
To use your "Math Whiz" software module, you need the following: One RB5X personal robot
RB5X voice/sound synthesis option

Age Level
"Math Whiz" challenges elementary school-age children and may also be played by adults.

Operation
1. Make sure RB5X is switched off.

2. Check to make sure that the voice/sound synthesis package has been installed according to the instructions that come with it.

3. Insert the software module into the socket on the RB5X's interface panel, making sure the guide marks on the socket and on the module match up. Push the module firmly into the socket.

4. Check the label on your "Math Whiz" module and set the module switch located to the right of the socket to the appropriate position (2K or 4K).

5. The robot's bumpers are numbered 1 through 8, starting with the bumper under the soner sensor as #1 and proceeding clockwise around the robot as you look down on it. To make "Math Whiz" easier to play, you may number RB5X's bumpers with an audio visual pen, china marker, or with self-stick numbers. Bumpers 1 and 8 must be pressed simultaneously to indicate the number 9, so put a "9"' in the area between bumpers 1. and 8. Bumpers 1 and 2 must be pressed simultaneously to indicate the number 0, so put an "0" in the area between bumpers 1 and 2.

6. Seat the players in a circle around RR5X so they can all comfortably reach its bumpers. Assign each player a number, beginning with 1.

7. Switch RB5X on. The robot's light--emitting diodes (LEns) flash and it plays a series of musical_ tones. (If this does not happen, check to be sure the software module is installed correctly, that the robot is adequately charged, and that the switch located to the right of the module socket is set to the proper position. If the LEDs still do not flash, see Section G, "Troubleshooting Your RB5X" in the RB5X Reference Manual.)

8. RB5X says, "I am going to test your math skills. Please press the number of players," and begins to rotate.

9. Press the bumper that corresponds to the number of "Math Whiz" players.

10. RB5X asks which math operation or operations you want to work on, Press the bumper corresponding to your choice as listed below:

Bumper	Math operation
1	Addition only
2	Subtraction only
3	Multiplication only
4	Division only
5	Addition and subtraction
6	Multiplication and division
7	Combine all four operations

11. "Math Whiz" can be played at eight different skill levels. Depending on the level you select, RB5X limits the size of the numbers used in your answers, according to the following:
Level 1: Answers do not exceed the number 12.
Level 2: Answers do not exceed the number 24.
Level 3: Answers do not exceed the number 36.
Level 4: Answers do not exceed the number 48.
Level 5: Answers do not exceed the number 60.
Level 6: Answers do not exceed the number 72.
Level 7: Answers do not exceed the number 84.
Level 8: Answers may include any number through 144.
When RB5X asks for skill level, press the bumper that corresponds to the level at which you wish to play.

12. RB5X calls for the first player, giving him or her a math problem to solve. The robot repeats each problem, then rotates so the player can reach its bumpers more easily.

13. The player must press the bumpers that correspond to the digits in the problem's answer. For example, if RB5X asks, "How much is 4 times 6?" the player must press bumper 2,
then bumper 4 to give the correct answer, 24.
If the player does not press a bumper within the time allowed (about one-and-a-half revolutions of the robot for each digit required in the correct answer) RB5X "disqualifies" him or her for that round of play. If the answer has two digits and the player presses only one within the time limit, RB5X also disqualifies him or her.

14. RB5X tells each player if he or she has correctly answered the problem or gives the correct answer if the response was wrong, and then calls for the next player. Players receive one point for each correct answer.

15. One game of "Math Whiz" lasts for six rounds, with each player receiving one turn per round. RB5X announces each player's score at the end of the game.

16. To play "Math Whiz" again, press any bumper. RB5X allows the number of players, math operation selection, and skill level to be changed before the next game begins.

17. Be sure to switch RB5X off before removing your "Math Whiz' software module.

How 'Math Whiz" Works
RB5X uses a random number generator to select both the numbers used in the math problems and the math operation (if you have selected a combination of operations). Once you have entered your answer to the problem by pressing the robot's bumpers, it compares your answer to its calculated answer (RB5X's computer is never wrongl) to see if your response is correct. If your answer is the same as RB5X's, one point is added to your score and the robot "makes up" a new problem for the next player.