

Dice Race: A Real Life Algorithm!



Post a picture of yourself with your columns on Facebook and tag Worlds UNBound to be entered into a draw for a FREE week of camp. Let us know how your experiment turned out!

Materials

Paper
Pencil or pen
Dice

What is an algorithm? An algorithm is a detailed step-by-step instruction set or formula for solving a problem or completing a task. Computer programmers write algorithms every day that instruct the computer how to perform a task! You can also use algorithms to help describe things that people do every day. In this activity, we will create an algorithm to describe how we play the Dice Race Game.

Directions

1. Read the rules below.
2. Play a couple rounds of the Dice Race game.
 - As you're playing, think about how you would describe everything that you're doing.
 - What would it look like from the computer's point of view?

Rules

<u>Game 1</u>	Turn 1	Turn 2	Turn 3	Total	} Circle the Winner
Player 1	_____	_____	_____	_____	
Player 2	_____	_____	_____	_____	

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Rules

1. Set each player's score to 0
2. Have the first player roll
3. Add points from that roll to player one's total score
4. Have the next player roll
5. Add points from that roll to player two's total score
6. Each player should go again two more times
7. Check each player's total score to see who has the most points
8. Declare Winner

Wrap-up

1. What did we learn?
2. What's the difference between an algorithm and a program?



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Answers:

A2:

An algorithm is the thinking behind what needs to happen, while the program is the actual instruction set that makes it happen.

An algorithm has to be translated into a program before a computer can run it.

Thank you for participating!
We hope you enjoyed this activity.
Check out our next activity on
FRIDAY!

