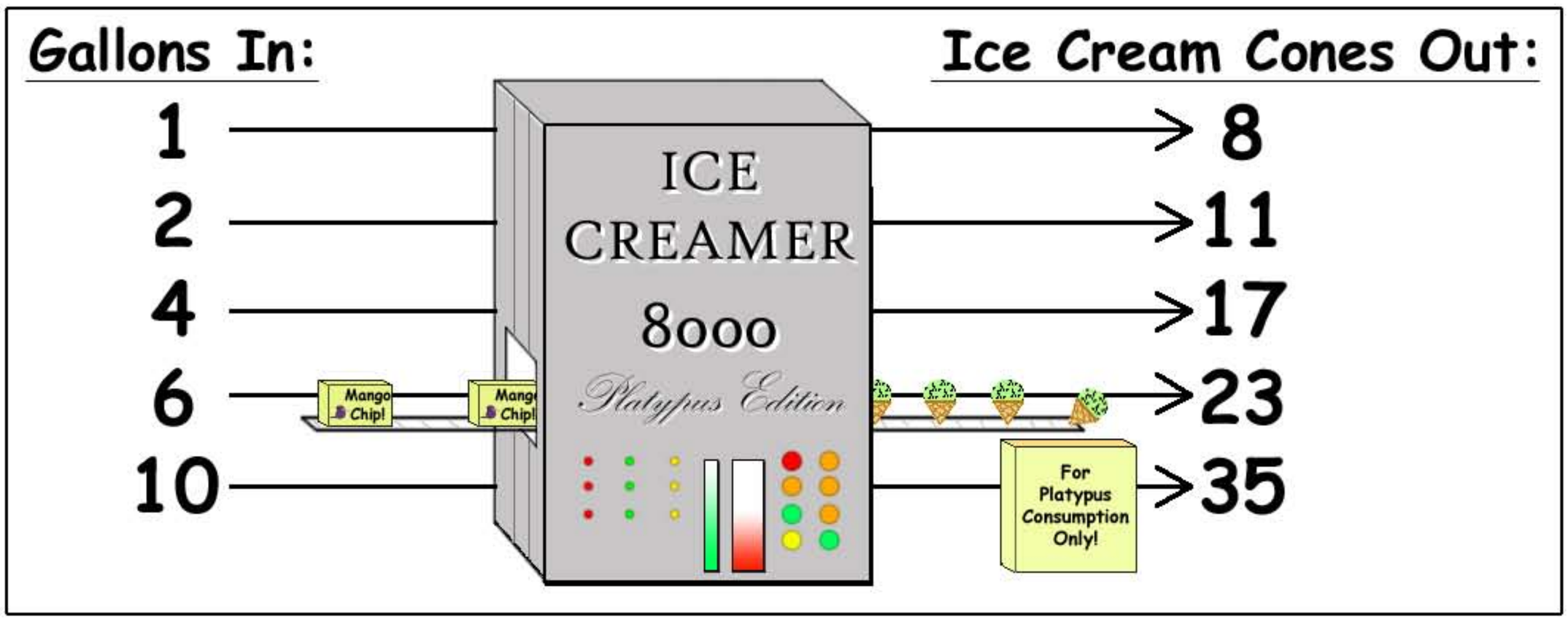
Mission-Simulation Assignment
Operation Ice Cream Machine - Answer Key

Still upset about the lack of ice cream, the Platypus has created a personal ice cream cone-making machine. All the Platypus has to do is pour in a few gallons of chocolate mango mint, **punch in two operations**, and ice cream cones come flying out the other side. The diagram shows how much ice cream Platypus put in the machine and how many cones came out.



Step A

What 2- operation rule does Platypus' machine use to turn the gallons of ice cream into ice cream cones?

Multiply by 3, then add 5, or **3n + 5**

Step B

- Use what you know about function tables to explain how you figured out the two operations the ice cream machine performs. Use words, numbers, drawings, and/or symbols to explain your thought process to your fellow AVU agents.

Answers will vary. Students should demonstrate that they have tested their rule using several input values. They may also explain the sequence of their rule (multiply first, then add) and why a different sequence (such as adding first, then multiplying) might not work.

- Platypus wants to improve his machine. Write a two-operation rule that will produce even more ice cream cones per gallon of ice cream. Then use words, numbers, and/or symbols to prove that your rule will actually produce more ice cream cones.

Answers will vary. Ensure that there are two operations and that the output for each input value is greater than 3n + 5. Students should show their calculations using their new rule for at least 3 of the 5 original input values (including the lowest, 1, and the highest, 10). Possible answers might include: 12n + 4, 47n -1, n + 8n, etc.

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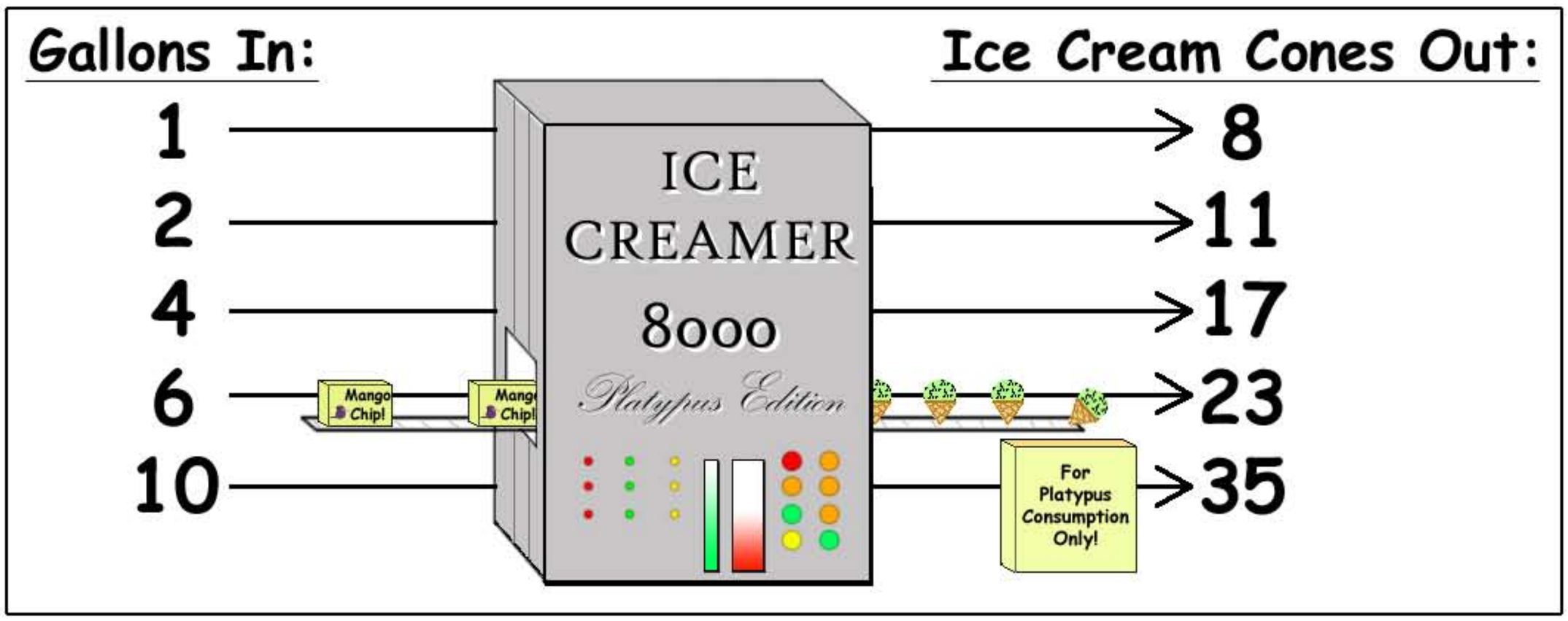

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