## Unit 6 Lesson 1: Inputs and Outputs

### 1 Dividing by 0 (Warm up)

#### Student Task Statement

Study the statements carefully.

* $12÷3=4$ because $12=4⋅3$
* $6÷0=x$ because $6=x⋅0$

What value can be used in place of $x$ to create true statements? Explain your reasoning.

### 2 Guess My Rule

#### Student Task Statement

Keep the rule cards face down. Decide who will go first.

1. Player 1 picks up a card and silently reads the rule without showing it to Player 2.
2. Player 2 chooses an integer and asks Player 1 for the result of applying the rule to that number.
3. Player 1 gives the result, without saying how they got it.
4. Keep going until Player 2 correctly guesses the rule.

After each round, the players switch roles.

### 3 Making Tables

#### Images for Launch



#### Student Task Statement

For each input-output rule, fill in the table with the outputs that go with a given input. Add two more input-output pairs to the table.

1. 

| * input
 | * output
 |
| --- | --- |
| * $\frac{3}{4}$
 | * 7
 |
| * 2.35
 |  |
| * 42
 |  |
|  |  |
|  |  |

1. 

| * input
 | * output
 |
| --- | --- |
| * $\frac{3}{4}$
 | * 7
 |
| * 2.35
 |  |
| * 42
 |  |
|  |  |
|  |  |

1. 

| * input
 | * output
 |
| --- | --- |
| * $\frac{3}{4}$
 | * 7
 |
| * 2.35
 |  |
| * 42
 |  |
|  |  |
|  |  |

* Pause here until your teacher directs you to the last rule.
1. 

| * input
 | * output
 |
| --- | --- |
| * $\frac{3}{7}$
 | * $\frac{7}{3}$
 |
| * 1
 |  |
| * 0
 |  |
|  |  |

#### Activity Synthesis





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