**Exploring Logarithms**

Use your calculator to find the logarithms in these tables to the nearest hundredth.

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| --- | --- | --- | --- | --- |
| *n* | log*n* |  | *n* | log*n* |
| 1 |  |  | 11 |  |
| 2 |  |  | 12 |  |
| 3 |  |  | 13 |  |
| 4 |  |  | 14 |  |
| 5 |  |  | 15 |  |
| 6 |  |  | 16 |  |
| 7 |  |  | 17 |  |
| 8 |  |  | 18 |  |
| 9 |  |  | 19 |  |
| 10 |  |  | 20 |  |

Look at the tables. Do you notice any patterns?

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Johnny states that log 2 + log 3 = log 6. Peter says that log 2 + log 3 = log 5. Who do you think is right? What makes you think this?

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Does this pattern work for any other addition statements?

Give one example from the table.

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Select numbers that are not in the table and check if this works.

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Create a *rule* for adding two logs together.

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Experiment with other operations. Can you find the *rules*?

**Subtracting two Logs**

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| Examples from the table. | Select numbers that are not in the table and check if this works. | The *Rule* |
|  |  |  |