## Unit 4 Lesson 14: Solving Exponential Equations

### 1 A Valid Solution? (Warm up)

#### Student Task Statement

To solve the equation , Lin wrote the following:

Is her solution valid? Be prepared to explain what she did in each step to support your answer.

### 2 Natural Logarithm

#### Student Task Statement

1. Complete the table with equivalent equations. The first row is completed for you.

|  | * exponential form | * logarithmic form |
| --- | --- | --- |
| * a. |  |  |
| * b. |  |  |
| * c. |  |  |
| * d. |  |  |
| * e. |  |  |

1. Solve each equation by expressing the solution using notation. Then, find the approximate value of the solution using the “ln” button on a calculator.

### 3 Solving Exponential Equations

#### Student Task Statement

Without using a calculator, solve each equation. It is expected that some solutions will be expressed using log notation. Be prepared to explain your reasoning.



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