

Notes

- 1. Algebraic equations
- 2. Variables
- 3. Square roots
- 4. Addition and subtraction
- 5. Solving for x
- 6. Mathematical operations
- 7. Equivalence

The text is an algebraic equation that states "X + 2 X + 2 X + 2 x square on forever equals 441." The goal is to find the value of x that makes this equation true.

To solve the equation, the first step is to subtract X from both sides, resulting in "2 x square + have the square root of 441

$$x + \sqrt{x + \sqrt{x + \cdots}} = 441$$

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- X." The square root of 441 is equal to 21, so the equation becomes "2 x square + 21 - X."

The text then states that "this inside the square is the same thing as this stuff right here," referring to the square root of 441. Therefore, the equation can be rewritten as "2 x square +21 - X = 441."

The final step is to simplify the equation, which is done by subtracting 21 from both sides. This results in "2 x square - X = 420."

$$x + \sqrt{x + \sqrt{x + \sqrt{x + \cdots}}} = 441$$

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