

Standard	Descriptor	SWBAT...
8.EE.A.2	Use square root and cube root symbols to represent solutions to equations of the form $x^2=p$ and $x^3=p$, where p is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that $\sqrt{2}$ is irrational.	<ul style="list-style-type: none"> Find square roots and cube roots Use the visual representation of a 2×2 square to demonstrate why the $\sqrt{4}$ is 2, etc. Use the visual representation of a $2 \times 2 \times 2$ cube to demonstrate why the $\sqrt[3]{8}$ is 2, etc.

1 Use the numbers shown to make the equations true. Each number can only be used once. To use a number, write it in the appropriate box in one of the equations.

4	8	10	64	100	1,000
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$$\sqrt{\boxed{}} = \boxed{}$$

$$\sqrt[3]{\boxed{}} = \boxed{}$$

2 Classify the numbers in the box as perfect squares and perfect cubes. To classify a number, write it in the appropriate column in the chart. Numbers that are neither perfect squares nor perfect cubes should **not** be placed in the chart.

1	64	96	125	200	256	333	361
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Perfect Squares but Not Perfect Cubes	Both Perfect Squares and Perfect Cubes	Perfect Cubes but Not Perfect Squares

- 3 Ashley and Brandon have different methods for finding square roots.

Ashley's Method:

To find the square root of x , find a number so that the product of the number and itself is x . For example, $2 \cdot 2 = 4$, so the square root of 4 is 2.

Brandon's Method:

To find the square root of x , multiply x by $\frac{1}{2}$. For example, $4 \cdot \frac{1}{2} = 2$, so the square root of 4 is 2.

Which student's method is **not** correct? Explain why the method you selected is not correct.

- 4 A square, with side length s , has an area of 324 square centimeters. This equation shows the area of the square.

$$s^2 = 324$$

What is the side length of the square in centimeters? Show or explain how you found your answer.