

MAT.08.ER.3.000EE.E.138 Claim 3

Sample Item ID:	MAT.08.ER.3.000EE.E.138
Grade:	08
Primary Claim:	Claim 3: Communicating Reasoning Students can clearly and precisely construct viable arguments to support their own reasoning and to critique the reasoning of others.
Secondary Claim(s):	Claim 1: Concepts and Procedures Students can explain and apply mathematical concepts and carry out mathematical procedures with precision and fluency.
Primary Content Domain:	The Number System
Secondary Content Domain(s):	Expressions and Equations
Assessment Target(s):	3 E: Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is. 3 A: Test propositions or conjectures with specific examples. 1 B: Work with radicals and integer exponents.
Standard(s):	8.EE.2
Mathematical Practice(s):	3
DOK:	3
Item Type:	ER
Score Points:	2
Difficulty:	L
Key:	See Sample Top-Score Response.
Stimulus/Source:	
Claim-specific Attributes (e.g., accessibility issues):	
Notes:	Part of PT set

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?

- Ashley's method
- Brandon's method

Explain why the method you selected is **not** correct.

Sample Top-Score Response:

Brandon's method is not correct.

Brandon's method works for the square root of 4, but it wouldn't work for the square root of 36. Half of 36 is 18, but the square root of 36 is 6 since 6 times 6 equals 36. Ashley describes the correct way to find the square root of a number.

Scoring Rubric:

Responses to this item will receive 0-2 points, based on the following:

2 points: The student shows a thorough understanding of how to identify correct reasoning regarding square roots. Each part of the response is complete and correct.

1 point: The student shows a partial understanding of how to identify correct reasoning regarding square roots. The student recognizes that Brandon's method is not correct but attempts to explain why Ashley's method is correct instead of showing why Brandon's method is not correct.

0 points: The student shows inconsistent or no understanding of how to identify correct reasoning regarding square roots. Responding only that Brandon's method is not correct is not sufficient to earn any points.