

Student

- You are trying to find the area of a circle with a radius of 2 units.
- You are proficient with math operations including exponents.
- You do understand that a circle's area is the space in the middle and that the circumference is the circle's perimeter.
- You do not have conceptual understanding of the formulas for circumference and area.
- You have seen the expressions $2\pi r$ (circumference) and πr^2 (area) but do not know which is which.
- You do understand how to use the formulas to find a value when you are given the radius.
- In this particular problem, instead of using the area formula, you use the easier looking circumference formula of $2\pi r$ to get " 4π " as the answer.
- You are confident you are correct and don't realize that you only accidentally got the correct answer because 4π is coincidentally the amount of square units in the area.

Teacher

- Your student is working on finding the area of a circle whose radius is 2 units long.
- You have taught students that the formula for circumference is $2\pi r$ and the formula for area is πr^2 .
- Determine what understanding the student has by asking questions, especially questions that encourage elaborate responses.

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