

Site for Open, Online Area Task: <https://goo.gl/pQCeEc> or the QR code



1. How many different strategies can you create? *Try some that are valid & some that are invalid.*

2. What math consequences can you notice? *The app doesn't tell you when you are right or wrong, so what do you notice that could be used in class discussion?*

Georgia Standards of Excellence

MGSE3.MD.5b: A plane figure which can be covered without gaps or overlaps by n unit squares is said to have an area of n square units.

MGSE3.MD.6 Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units).

MGSE3.MD.7 Relate area to the operations of multiplication and addition. a. Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths. c. Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths a and $b + c$ is the sum of $a \times b$ and $a \times c$. Use area models to represent the distributive property in mathematical reasoning.

MGSE3.G.2 Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. For example, partition a shape into 4 parts with equal area, and describe the area of each part as $\frac{1}{4}$ of the area of the shape.

MGSE4.MD.8 Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems

MGSE5.NF.4 Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths.

Potential Learning Outcomes:

- A. Give reasons to not leave gaps / overlaps (MGSE3.MD.5b / MGSE3.MD.6)
- B. Divide a whole area into equal area parts (MGSE3.G.2)
- C. Find strategies to partition a shape and add areas (MGSE3.MD.7c / MGSE4.MD.8)
- D. Building to area formula: Find strategies to count number of rows & columns (MGSE3.MD.7a)
- E. Reason about the meaning of the area formula for rectangles (MGSE3.MD.5a / MGSE5.NF.4), specifically:
 - a. Describe reasoning about whether or not the area formula changes if rectangular units are used to measure a rectangle instead of square units
 - b. describe reasoning about whether or not area formula changes if rectangle units are two different orientations
- F. develop strategies that use over- and underestimates to approximate a more accurate measure (MP5)

Choose at least 2 learning outcomes to start with and write the letters here:

For your first learning outcome, sort the cards:

- *Select 3 or 4 strategies that would support the learning outcome:*

- *Sequence the strategies to “tell a story” supporting that learning outcome*

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What changes do you see in your choices from your first learning outcome to the second?
(reflection on being strategic in matching selecting / sequencing to learning outcomes)

What strategies were missing?

(reflection for “anticipating” and bringing up strategies your students don’t create)