Bricks for Books *TR003 scoring rubric*

Math Domain

[x] Number/Quantity	[ ] Shape/Space	[ ] Function/Pattern
[ ] Chance/Data	[ ] Arrangement	

Math Actions (possible weights: 0 through 4)

[2] Modeling/Formulating	[2] Manipulating/Transforming
[3] Inferring/Drawing Conclusions	[3] Communicating

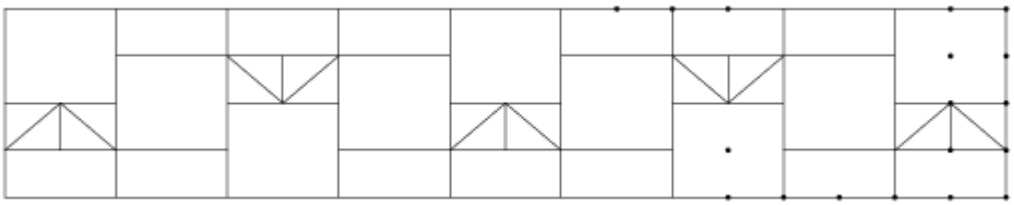
Math Big Ideas

[ ] Scale	[ ] Reference Frame	[x] Representation
[ ] Continuity	[ ] Boundedness	[ ] Invariance/Symmetry
[x] Equivalence	[ ] General/Particular	[ ] Contradiction
[ ] Use of Limits	[ ] Approximation	[ ] Other

1. It would take two family bricks to cover one company brick.

It would take eight individual bricks to cover one company brick

2. Students should complete the walkway pattern with the bricks indicated below:



3. The library would collect $3,600.00 from the donations.

Some students may realize that there are 36 individual "cells" in this pattern (the size of a family brick) and each cell is worth $100.

Others may see it as a collection of 9 company bricks @ $200 each = $1,800, 13 family bricks @ $100 each = $1,300, and 20 individual bricks @ $25 each = $500, for a total of $3,600.00

4. Students should cover the same 36 cell area with a pattern of their own, using combinations of company, family, and individual bricks.

5. Students should demonstrate that, since each cell is worth $100 and there are 36 cells to be filled, the total donation will always be $3,600 regardless of the pattern.

	partial level (1 or 2)	full level (3)
Modeling/ Formulating (weight: 2)	Student is able to correctly identify and extend the pattern for some of #2. Student is not able to design an original pattern of bricks to cover the walkway space.	Student is able to correctly identify and extend the pattern for question #2. Student is able to design an original of bricks that covers the same amount of space.
Transforming/ Manipulating (weight: 2)	Student achieves the correct numerical answers for some, but not all of **1a**, **1b** and **3**	Student gives correct numerical answers for **1a**, **1b**, and **3**.
Inferring/ Drawing Conclusions (weight: 3)	Student either uses an incorrect number of bricks for **4**, or gives an incorrect answer for **5**.	Student gives correct answers for **4** and **5**.
Communicating (weight: 3)	Student does not clearly articulate a response for **5**.	Student clearly expresses a concise, solid explanation for **5**.