**Sample Facilitation Questions to Use with Square Tiles**

*Some questions are in the context of area models, while others use the tiles in other contexts.*

1. Is 24 a perfect square? Support your answer using the tiles.
2. Create three examples of perfect squares using the tiles. Write them as equations using exponents.
3. What are the factors of 24? Illustrate using the tiles.
4. Use the tiles to demonstrate the multiplicative identity property.
5. List 5 prime numbers. Demonstrate your understanding with the square tiles.
6. Are all even numbers composite? Support your answer with examples or counterexamples using the tiles.
7. Are all odd numbers prime? Support your answer with examples or counterexamples using the tiles.
8. Use the tiles to demonstrate the commutative property of multiplication.
9. Write an algebraic formula to find the area of a rectangle.
10. Create 3 different 2-step expressions that are equal to 20.
11. Illustrate the Pythagorean Theorem with a 3,4,5 right triangle.
12. Find the probability of selecting a certain color tile.
13. What fraction of the tiles are yellow?
14. Practice substitution. Assign values to each color and find the total.
15. Practice weighted average. Assign percent weights and values to each color. Find the total.
16. Create a model of a multi-step equation and ask a colleague to write the equation.
17. Create a hands-on bar graph. Sort the tiles by color and arrange each color as a bar in a bar graph.
18. Assign a value to each color. Try various combinations to total 100.

**Rectangles as Problem-Solving Tools**

***Use Area Models to Teach Math Concepts at All Levels***

*COABE Conference 2015, Denver CO, presented by Amy Vickers*

Rectangular arrays

Measured area models

Abstract area models

Application: multiplying fractions

Application: long division

Application: examining properties

Application: multiplying binomials