

R4 – TILE PILE WORKSHEET



Go to student.desmos.com, get the class password from your teacher, and do the Desmos activity called Tile Pile.

For this part we will focus on slides 1-3 of the activity (Mr. Martinez just hired you to tile his bathroom floor).

- As you did this activity, you were told that you used 16 tiles to cover a 4 square foot section of the floor. What is the length of each side of this square? **2 feet**
- Find the dimensions and the area of one of the purple rectangular tiles. $\frac{1}{2}$ foot by 1 foot
- Compare your tiling with as many partners as is practical in class. **Answers will vary.**

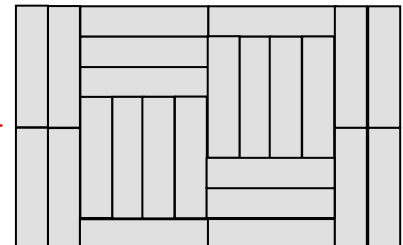
Did anyone tile exactly the same as you?

How many classmates that you compared with tile differently?

- Why does it always take 16 of any type of piece to tile the original 4 square foot floor?
Each piece has the same area.

Chase tiled the floor to the right using only the purple tiles from this activity. **3 feet**

- How many tiles did he use? **24 tiles**
- Write the dimensions for his floor on the diagram. **2 feet**
- What is the perimeter of his floor? **10 feet**
- What is the area of his floor? **6 square feet**



- Two entries from the table on slide 4 are provided here. Use this table to determine the area of Chase's tiled floor. Clearly explain your reasoning, and whether or not this calculation agrees with your calculation in problems 5 and 8. **Half of 12 is 6, so half of 48 is 24 tiles.**
- Use this data to find the area of a floor that is tiled with 256 tiles.

Area (sq ft)	Number of Tiles
4	16
12	48
6	24
60	240
64	256

The area of a floor tiled with 256 tiles is 64 sq ft.