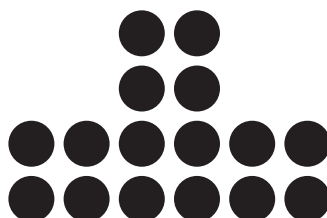
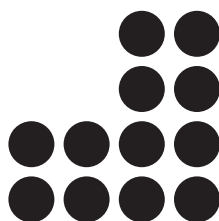


Lesson 11: Area and the Multiplication Table

- Let's explore area and the multiplication table.

Warm-up: How Many Do You See: Arrays that Grow

How many do you see? How do you see them?



11.1: Area and the Multiplication Table

What do you notice? What do you wonder?

×	1	2	3	4	5
1					
2					
3	3				
4					
5					

×	1	2	3	4	5
1					
2					
3		6			
4					
5					

×	1	2	3	4	5
1					
2					
3			9		
4					
5					

×	1	2	3	4	5
1					
2					
3				12	
4					
5					

1. Use the blank table to create your own rectangle.

Start from the top left corner. Record the product that the rectangle represents. Be prepared to explain your reasoning.

×	1	2	3	4	5
1					
2					
3					
4					
5					

2. Use the following table to create a rectangle with an area of 24 square units. Start from the top left corner. Record the product that the rectangle represents. Be prepared to explain your reasoning.

×	1	2	3	4	5	6	7	8	9
1									
2									
3									
4									
5									
6									
7									
8									
9									

11.2: Products in the Multiplication Table

What do you notice? What do you wonder?

×	1	2	3	4	5	6	7	8	9	10
1		2								
2	2	4	6	8	10					
3		6								
4		8								
5		10								
6										
7										
8										
9										
10										

- Find as many other products in the table as you can. You may want to start with rows and columns that show products of 2, 5, and 10.
- What patterns do you see in the row and column that show products of 5?
- Write some equations that show one of the patterns that you see in the multiplication table. Explain or show your reasoning.