Unit 2, Lesson 11

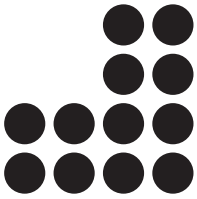
Area and the Multiplication Table

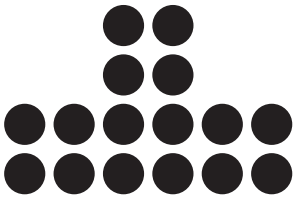
Let's explore area and the multiplication table.

Warm-up

How Many Do You See: Arrays That Grow

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





Activity 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 blank 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									

Activity 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										

1. Write 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.

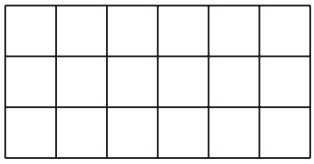
2. What patterns do you see in the row and the column that show products of 5?

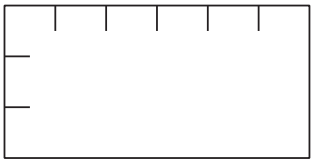
3. Write some equations that show 1 of the patterns that you see in the multiplication table. Explain or show why your pattern happens.

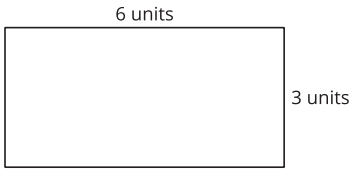
Section B Summary

We learned how area is related to multiplication. We multiplied the side lengths of a rectangle to find its area.

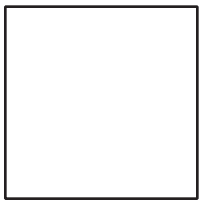
$$6 \times 3 = 18 \text{ square units}$$







We also learned how different square units are useful for measuring area in different situations and solved problems involving area.



square inch

square meter