



Patterns in the Multiplication Table

Let's find patterns in the multiplication table and use them to multiply.

Warm-up

Notice and Wonder: Multiplication Table

What do you notice? What do you wonder?

\times	1	2	3	4	5
1	1	2	3	4	5
2	2	4	6	8	10
3	3	6	9	12	15
4	4	8	12	16	20
5	5	10	15	20	25

Activity 1

Products in the Table

Here is a partially completed multiplication table.

\times	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5					
2	2	4	6	8	10		A			
3	3	6	9	12	15			B		
4	4	8	12	16	20	C				
5	5	10	15	20	25		D			
6	6	12	18	24	30			E		
7	7	14	21	28	35		F			
8	8	16	24	32	40	48		G		
9	9	18	27	36	45	54	63			
10	10	20	30	40	50	60	70	80		

1. Use the products in the table to help you find the numbers that should replace letters A-G. Be prepared to explain your reasoning.
2. Find the number that should go in 3 other empty cells in the table. Use:
 - a. 7 as a factor

b. 9 as a factor

c. 10 as a factor

Be prepared to explain your reasoning.

Activity 2

If I Know, Then I Know: Multiplication

1. In each row, write at least 2 multiplication facts you can figure out because you know the given multiplication fact in the left column. Be prepared to share your reasoning.

If I know . . . ,	then I also know . . .
2×4	$4 \times 2, 4 \times 4, 2 \times 8$
3×5	
4×10	
7×2	
5×8	

2. If time permits, complete the rest of the multiplication table from the previous activity. Use the multiplication facts you know to find those you don't know.