Lesson Title: Functions Through the Grades Activity

Standards: 4.OA.5 Generate and Analyze Patterns
5.OA.3 Analyze Patterns and Relationships

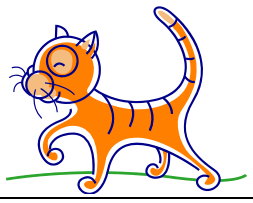
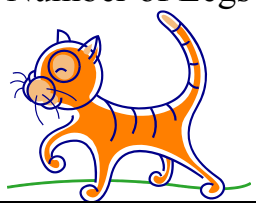
Lesson Description:
Students do a gallery walk to look at the function tables on pages 2-11. While they walk around with their groups they discuss what they think the rule is for each table. They also discuss how they could complete the table. They do not need to record any of this, it is just done orally.

Next, each group is given one of the equations on pages 12-21. Their task is to find the function table that their equation matches. They should stand by the table until all groups have found the table that matches their equation. Next, students look around the room and check to be sure each group is standing beside the correct table. Each group must justify why their equation matches their table.

Students sit back at their desks to work with their partners on completing the tables on page 22 using the equations given on page 23. After they complete the tables, they may switch with another group. That group tries to match the equations (cut along the dotted lines) with the tables. Students may switch several times amongst groups.

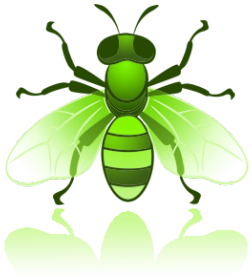
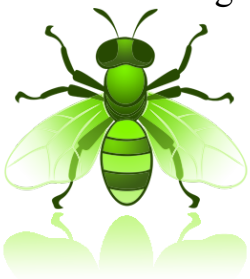
After these activities, students will take notes on finding the rules for function tables and do examples and you tries similar to the tables used in the gallery walk.

Find the rule.

Number of Cats 	Number of Legs 
1	4
	8
	16
	24
	32

Complete the table.

Find the rule.

Number of Insects 	Number of Legs 
1	6
3	
5	
10	60
12	

Complete the table.

Find the rule.

Number of Movie Tickets	Cost per Ticket
1	$8
2	$16
6	$48
8	
	$80

Complete the table.

Find the rule.

Input	Output
2	6
4	8
6	
8	
10	14

Complete the table.

Find the rule.

Input	Output
12	6
10	5
8	
6	
4	2

Complete the table.

Find the rule.

Input	Output
15	10
20	15
25	
	25
35	

Complete the table.

Find the rule.

Input	Output
3	10
5	16
7	
9	28

Complete the table.

Find the rule.

Input	Output
12	4
15	5
18	
	7
24	

Complete the table.

Find the rule.

Input	Output
12	24
14	26
16	
18	
20	32

Complete the table.

Find the rule.

Students 	2	3	4	5	
Socks 	4	6			12

Complete the table.

$$y=x\bullet 4$$

$$y=x\bullet 6$$

$$y=8x$$

$$y=x+4$$

$$y=x\div 2$$

$$y=x-5$$

$$y=3x+1$$

$$y=\frac{x}{3}$$

$$y=x+12$$

$$y=x\bullet 2$$

Name _______________
Date ________________

Input	Output

Input	Output

Input	Output

Input	Output

Input	Output

Input	Output

Input	Output

Input	Output

Input	Output

$y = x + 6$	$y = x + 3$	$y = x + 2$
$y = x - 2$	$y = x - 3$	$y = x - 4$
$y = x \bullet 3$	$y = x \bullet 5$	$y = x \bullet 10$
$y = x \div 4$	$y = x \div 5$	$y = x \div 10$
$y = \frac{1}{2}x$	$y = 2x + 1$	$y = 2x + 2$
$y = 4x + 1$	$y = 5x + 1$	$y = 2x + 4$