

Name _____

Date _____ Pd. _____

Exit Card: Writing Equations from Patterns II

The table below shows a relationship between x and y .

x	y
1	1
2	8
3	15
4	22
5	29
6	36

Which of these equations represents this relationship?

F $y = 6x + 7$
 G $y = 6x - 7$
 H $y = 7x + 6$
 J $y = 7x - 6$

The table below shows a relationship between x and y .

x	y
-4	-2
0	0
4	2
8	4

Which of these equations represents this relationship?

F $y = x^2$
 G $y = 2x$
 H $y = \frac{1}{2}x$
 J $y = x - 2$

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Homework: Pages 244 – 245 (27, 28, 31 – 33)

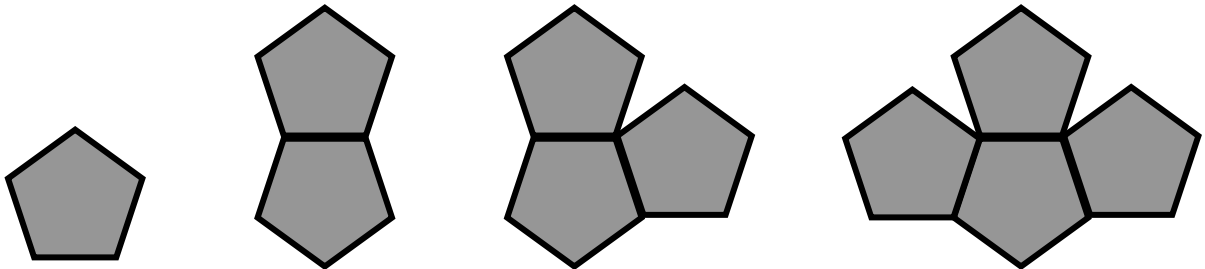
In 1201, Leonardo Fibonacci introduced his now famous pattern of numbers called the Fibonacci sequence:

1, 1, 2, 3, 5, 8, 13, . . .

Notice the pattern in this sequence. After the second number, each number in the sequence is the sum of the two numbers that precede it. That is $2 = 1 + 1$, $3 = 2 + 1$, $5 = 3 + 2$, and so on.

27. Write the first 12 terms of the Fibonacci sequence.
28. Notice that every third term is divisible by 2. What do you notice about every fourth term? Every fifth term?

Suppose you arrange a number of pentagons so that only one side of each pentagon touches. Each side of each pentagon is 1 centimeter.



1 pentagon

2 pentagons

3 pentagons

4 pentagons

31. For each arrangement of pentagons, complete the perimeter.
32. Write an equation in function form to represent the perimeter $f(n)$ of n pentagons.
33. What is the perimeter if 24 pentagons are used?