Name Period Date

Sec 1 **In Class 3-2 A**
Writing Growth Equations **Unit 3**

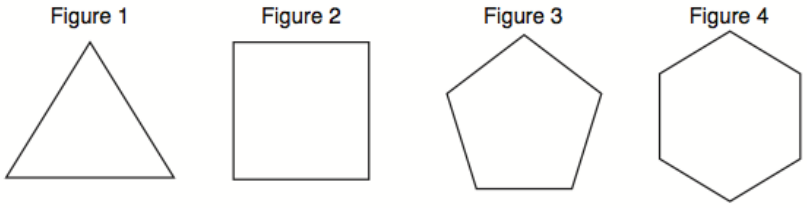
Write an explicit equation to represent each pattern below. <u>Write your equation in two equivalent forms.</u>

1. Mr. Smith notices a pattern in the number of people attending robotics club. The first week there were 19 students. After weeks 1, 2, 3, 4, and 5, the number of students attending the meeting was 31, 43, 55, 67, and 79, respectively.

2. Cameron tracks the growth of leaves on a tree in his yard. Each week, he notes the number of open leaves on the tree. The first time he counts the leaves there are 12 leaves. After weeks 1, 2, 3, and 4 the tree has 60, 300, 1500, and 7500 leaves, respectively.

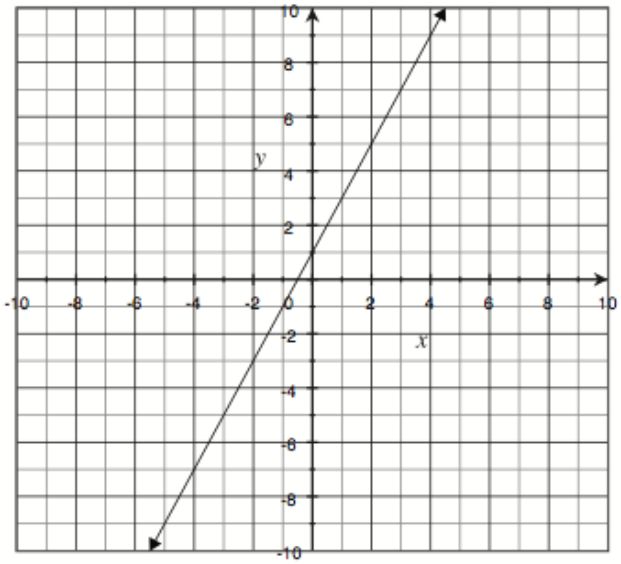
3. In 2015 there were 5000 cell phone subscribers in the town of Smallville. The number of subscribers over the next three years were 7000, 9800 and 13720 respectively.

4. Given the diagram below, describe the number of sides in Figure *x*.

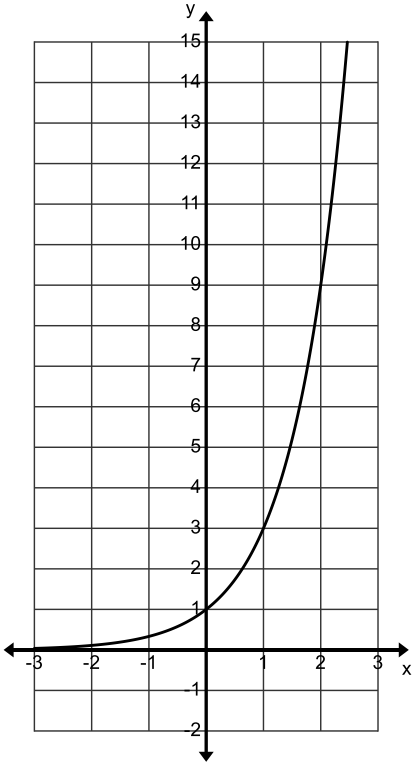


If possible, determine a linear or exponential equation that represents the relationship between *x* and *y* in each graph or table that follows. <u>Write your equation in two equivalent forms.</u>

5.



6.



7.

x	y
1	-49
2	-98
3	-686
4	-4802

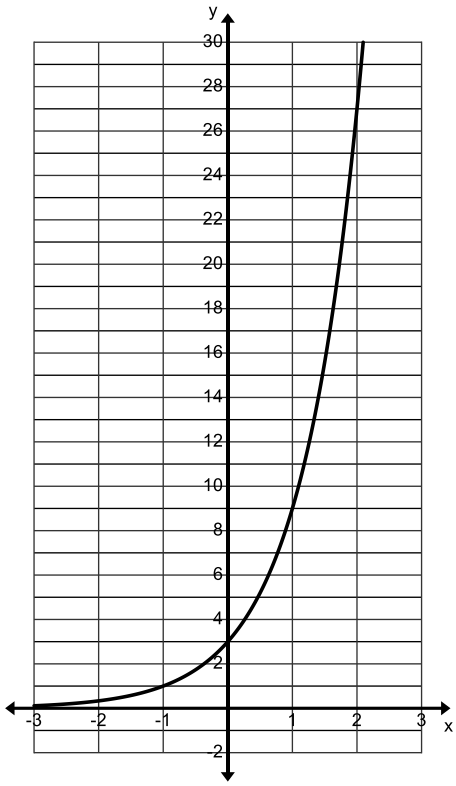
8.

x	y
0	4
1	10
2	25
4	156.25

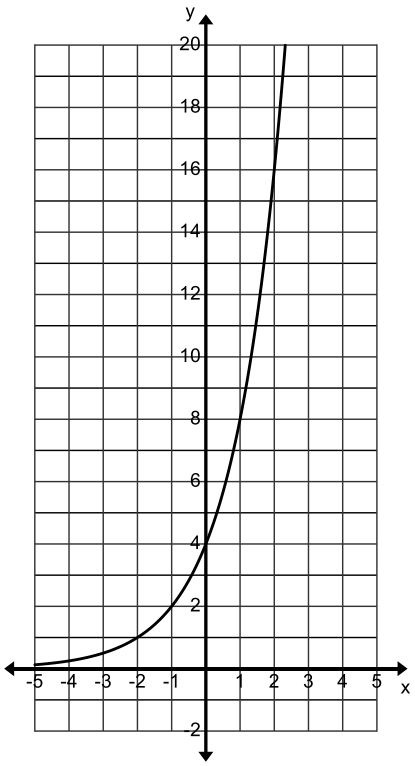
9.

x	y
0	-12
2	-4
3	0
4	4

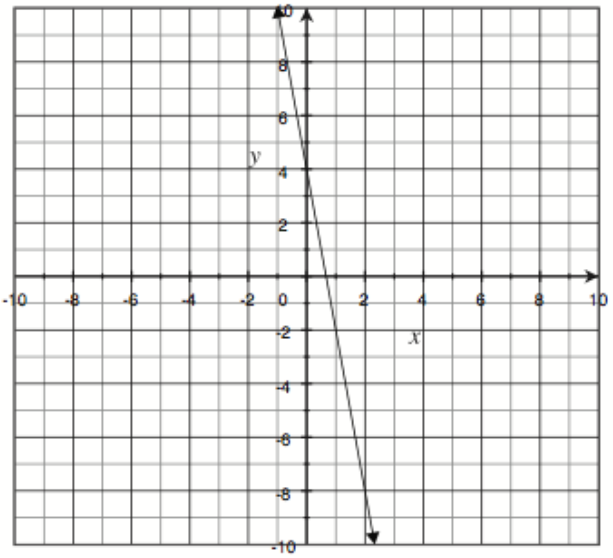
10.



11.



12.



13.

x	y
1	80
2	40
3	20
4	10