

Name _____ Date _____

Is There a Pattern Here? Recognizing Patterns and Sequences

Vocabulary

Choose the term that best completes each statement.

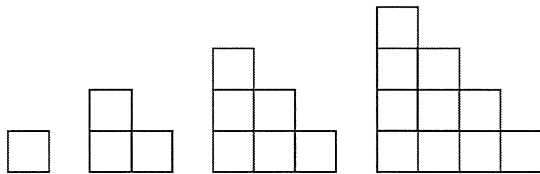
sequence term of a sequence infinite sequence finite sequence

1. A sequence which terminates is called a(n) _____.
2. A(n) _____ is an individual number, figure, or letter in a sequence.
3. A(n) _____ is a pattern involving an ordered arrangement of numbers, geometric figures, letters, or other objects.
4. A sequence which continues forever is called a(n) _____.

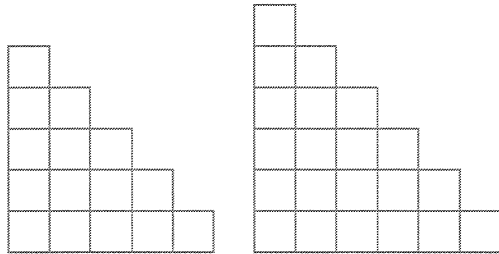
Problem Set

Describe each given pattern. Draw the next two figures in each pattern.

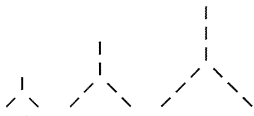
1.



The second figure has 2 more squares than the first, the third figure has 3 more squares than the second, and the fourth figure has 4 more squares than the third.



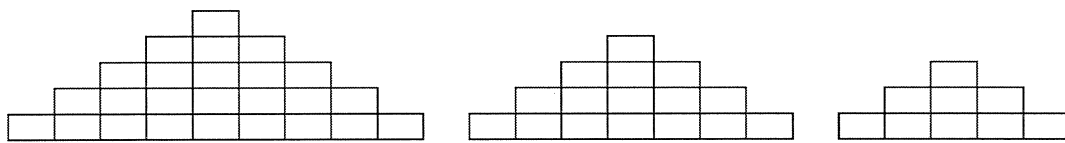
2.



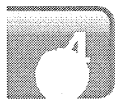
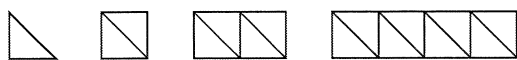
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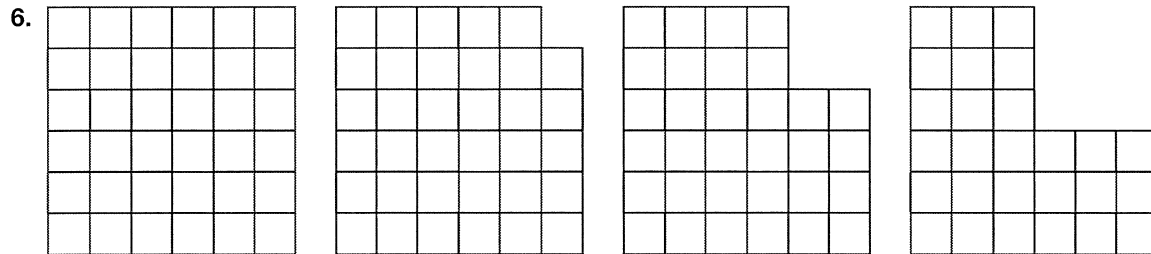
4.



5.



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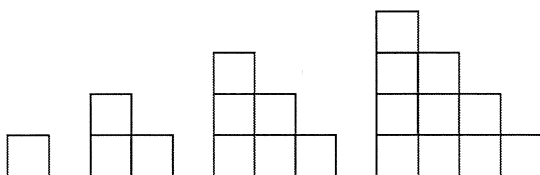


Write a numeric sequence to represent each given pattern or situation.

7. The school cafeteria begins the day with a supply of 1000 chicken nuggets. Each student that passes through the lunch line is given 5 chicken nuggets. Write a numeric sequence to represent the total number of chicken nuggets remaining in the cafeteria's supply after each of the first 6 students pass through the line. Include the number of chicken nuggets the cafeteria started with.

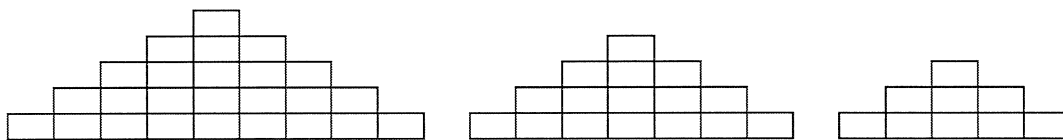
1000, 995, 990, 985, 980, 975, 970

8. Write a numeric sequence to represent the number of squares in each of the first 7 figures of the pattern.



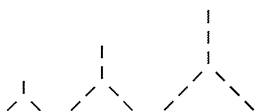
9. Sophia starts a job at a restaurant. She deposits \$40 from each paycheck into her savings account. There was no money in the account prior to her first deposit. Write a numeric sequence to represent the amount of money in the savings account after Sophia receives each of her first 6 paychecks.

10. Write a numeric sequence to represent the number of blocks in each of the first 5 figures of the pattern.



11. Kyle is collecting canned goods for a food drive. On the first day he collects 1 can. On the second day he collects 2 cans. On the third day he collects 4 cans. On each successive day, he collects twice as many cans as he collected the previous day. Write a numeric sequence to represent the total number of cans Kyle has collected by the end of each of the first 7 days of the food drive.

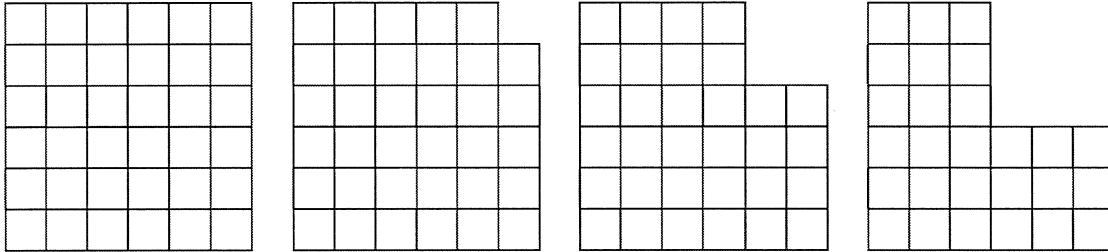
12. Write a numeric sequence to represent the number of line segments in each of the first 7 figures of the pattern.



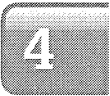
13. For her 10th birthday, Tameka's grandparents give her a set of 200 stamps. For each birthday after that, they give her a set of 25 stamps to add to her stamp collection. Write a numeric sequence consisting of 7 terms to represent the number of stamps in Tameka's collection after each of her birthdays starting with her 10th birthday.

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14. Write a numeric sequence to represent the number of squares in each of the first 6 figures of the pattern.



15. Leonardo uses 3 cups of flour in each cake he bakes. He starts the day with 50 cups of flour. Write a numeric sequence to represent the amount of flour remaining after each of the first 7 cakes Leonardo bakes. Include the amount of flour Leonardo started with.



16. Write a numeric sequence to represent the number of triangles in each of the first 7 figures of the pattern.

