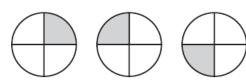
### Sketch the next figure in the pattern.

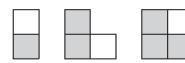
1. •













## The first three objects in a pattern are shown. How many squares are in the next object?

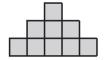
5.





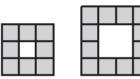








8.



# Predict the next two numbers in the sequence of numbers. Describe a pattern in the sequence of numbers.

9. 2, 9, 16, 23, 30, . . .

10. 81, 27, 9, 3, 1, . . .

11. 4, 5, 7, 10, 14, . . .

12. 1, 4, 9, 16, 25, . . .

13. 3, 15, 75, 375, 1875, . . .

14. 100, 98, 94, 88, 80, . . .

15. -50, -45, -35, -20, 0, . . .

16.  $\frac{1}{4}$ ,  $\frac{1}{2}$ ,  $\frac{3}{4}$ , 1,  $\frac{5}{4}$ , ...

# **Inductive Reasoning**

26. If a triangle is not equilateral, then it is not regular.

<ul> <li>17. All prime numbers are odd.</li> <li>18. If the product of two numbers is positive, then the two numbers must both be positive.</li> <li>19. The quotient of two whole numbers is a whole number.</li> <li>20. The square root of a number x is always less than x.</li> <li>Write the contrapositive of the following statement.</li> <li>21. If three points are not collinear, then they form a triangle.</li> <li>22. If a polygon is concave, then it is not regular.</li> <li>Write the converse of the following statement.</li> <li>23. If two angles are supplementary angles, then they have a sum of 180°.</li> <li>24. If an angle is a right angle, then the sides of the angle are perpendicular.</li> <li>Write the inverse of the following statement.</li> <li>25. If a triangle is a right triangle, then it is not equiangular.</li> </ul>	Show the conjecture is false by finding a counterexample.
<ul> <li>19. The quotient of two whole numbers is a whole number.</li> <li>20. The square root of a number x is always less than x.</li> <li>Write the contrapositive of the following statement.</li> <li>21. If three points are not collinear, then they form a triangle.</li> <li>22. If a polygon is concave, then it is not regular.</li> <li>Write the converse of the following statement.</li> <li>23. If two angles are supplementary angles, then they have a sum of 180°.</li> <li>24. If an angle is a right angle, then the sides of the angle are perpendicular.</li> <li>Write the inverse of the following statement.</li> </ul>	17. All prime numbers are odd.
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<ul><li>24. If an angle is a right angle, then the sides of the angle are perpendicular.</li><li>Write the inverse of the following statement.</li></ul>	
Write the inverse of the following statement.	25. If two angles are supprementally angles, then they have a sum of 100.
	24. If an angle is a right angle, then the sides of the angle are perpendicular.
23. If a triangle is a right triangle, then it is not equiangular.	
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