

# Exploring Geometry in Nature

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5th Grade Math Practice

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Solve each problem. Show your work when needed.

1. Find the area of a hexagon with a side length of 4 units.  
Area =  $(33/2) * \text{side}^2 =$  \_\_\_\_\_

2. A snail's shell makes a spiral turn every 1.5 cm. If it has made 6 turns, how long is the spiral? \_\_\_\_\_ cm

3. Calculate the volume of a cube with a side length of 3 cm.  
Volume =  $\text{side}^3 =$  \_\_\_\_\_

4. Which has a greater area: a circle with a radius of 3 units or a square with a side of 5 units? Circle Area =  $\pi r^2$ , Square Area =  $\text{side}^2$

5. A beehive has 12 hexagonal cells. If each cell holds 1.5 liters of honey, how much honey can the hive hold? \_\_\_\_\_ liters

6. What is the next Fibonacci number after 5, 8, 13, \_\_\_\_\_

7. A fractal pattern has no repeating elements. True or False?

True  False

8. Multiply:  $2.5 \times 0.4 =$  \_\_\_\_\_

9. If a spiral shell grows by 2 cm in diameter each month, how much will it grow in 3 months? \_\_\_\_\_ cm

10. Add:  $3/4 + 1/2 =$  \_\_\_\_\_

11. Circle the greater number: 0..8:

75 or  0

12. A pattern on a leaf has 5 repeating shapes. If each shape has 3 sides, how many sides are there in total? \_\_\_\_\_

13. What number comes next in the pattern? 1, 1, 2, 3, 5, \_\_\_\_\_

14. Hexagons can be found in honeycombs. True or False?

True  False

15. Subtract:  $5.5 - 2.25 = \underline{\quad}$

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**Answer Key**

1. 41.57 2. 9 3. 27 4. Square 5. 18 6. 21 7. False 8. 1 9. 6 10. 5/4 or 1.25 11. 0.8 12. 15 13. 8 14. True 15. 3.25