Sequences and Series: Worksheet

Algebra · Worksheet for https://jugami.com/algebra/sequences-and-series/ · For instant feedback, try the self-guided quiz online.

Name _____ Date _____

Work each one on paper. Show your work, including the formula you use.

1. Find the common difference and a_{20} for the sequence 4, 9, 14, 19, and so on.

Answer: _____

2. Find the common ratio and a_6 for the sequence 3, −6, 12, −24, and so on.

Answer: _____

3. Is 5, 15, 45, 135, and so on arithmetic or geometric? Write its explicit formula.

Answer: _____

4. Write an explicit formula for 30, 26, 22, 18, and so on.

Answer: _____

5. A sequence has $a_1 = 7$ and $a_n = a_{n-1} + 3$. List the first four terms.

Answer: _____

6. Find the sum of the first 20 terms of 3, 7, 11, 15, and so on.

Answer: _____

7. Find the sum of the first 6 terms of 2, 6, 18, and so on.

Answer: _____

8. Find the value of the sum of $(2k + 1)$ from $k = 1$ to $k = 10$.

Answer: _____

9. A car worth $20,000 loses 10% of its value each year. Write a formula for its value at the start of year n.

Answer: _____

Bonus

A little extra practice with the same skills.

10. Find the 12th term of 5, 8, 11, 14, and so on.

Answer: _____

11. Find the sum of the first 5 terms of 1, 2, 4, 8, and so on.

Answer: _____

12. Write an explicit formula for 9, 7, 5, 3, and so on.

Answer: _____