

General Algebra 2 Worksheet #3 Unit 10 page 1 _____

For a particular arithmetic sequence $a_1 = 5$ and $d = 3$. Answer the following questions.

1. What are the first five terms of the sequence? _____
2. What is the recursive formula for the sequence? _____
3. What is the explicit formula for the sequence? _____
4. What is the 50th term in the sequence? _____

For a particular arithmetic sequence $a_1 = 2$ and $d = 4$. Answer the following questions.

5. What are the first five terms of the sequence? _____
6. What is the recursive formula for the sequence? _____
7. What is the explicit formula for the sequence? _____
8. What is the 50th term in the sequence? _____

For a particular geometric sequence $a_1 = 3$ and $r = 2$. Answer the following questions.

9. What are the first five terms of the sequence? _____
10. What is the recursive formula for the sequence? _____
11. What is the explicit formula for this sequence? _____
12. What is the 10th term in the sequence? _____

For a particular geometric sequence $a_1 = 16$ and $r = 1/2$. Answer the following questions.

13. What are the first five terms of the sequence? _____
14. What is the recursive formula for the sequence? _____
15. What is the explicit formula for this sequence? _____
16. What is the 10th term in the sequence? _____

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Use an appropriate formula to solve each of the following problems.

17. A particular job has a starting salary of \$15,000 per year with a guaranteed raise of \$340 per year. What will be the salary for the 15th year?

18. A particular job has a starting salary of \$18,000 per year with a guaranteed raise of \$575 per year. What will be the salary for the 12th year?

19. A particular job has a starting salary of \$15,000 per year with a guaranteed 2% raise per year. What will be the salary for the 15th year?

20. A particular job has a starting salary of \$18,000 per year with a guaranteed raise of 3.5% per year. What will be the salary for the 12th year?

21. A ball is dropped from a height of 200 inches onto a concrete floor. On each bounce the ball rebounds to 60% of its previous height. How high will the ball bounce after it hits the floor for the 8th time?

22. A ball is dropped from a height of 80 inches onto a concrete floor. On each bounce the ball rebounds to 75% of its previous height. How high will the ball bounce after it hits the floor for the 10th time?