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| Arithmetic Sequence: A sequence of terms that have a common difference between them.   * Formula: where is the 1st number in the sequence and *d* is the common difference.   Geometric Sequence: A sequence of terms that have a common ratio between them.   * Formula: where is the 1st number in the sequence and *r* is the common ratio. |
| **Are the following sequences arithmetic or geometric? If they are arithmetic, stated the value of *d*. If they are geometric, state the value of *r*.**  1. 6, 12, 18, 24, … type: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ d or r: \_\_\_\_\_\_  2. 6, 11, 16, … type: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ d or r: \_\_\_\_\_\_  3. 2, 14, 98, 686, … type: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ d or r: \_\_\_\_\_\_  4. 160, 80, 40, 20, … type: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ d or r: \_\_\_\_\_\_  5. -40, -25, -10, 5, … type: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ d or r: \_\_\_\_\_\_  6. 7, -21, 63, -189, … type: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ d or r: \_\_\_\_\_\_ |
| **For the following sequences, find and d and state the formula for the general term.**  7. -10, -4, 2, 8, 14, … = \_\_\_\_\_\_ d = \_\_\_\_\_\_ Formula:  8. 10, 8, 6, 4, … = \_\_\_\_\_\_ d = \_\_\_\_\_\_ Formula:  9. 36, 31, 26, 21, … = \_\_\_\_\_\_ d = \_\_\_\_\_\_ Formula: |
| 10. Use the formula from #9 to find the seventh term and the 20th term. |
| For the following sequences, find and r and state the formula for the general term.  11. 4, 20, 100, 5000, … = \_\_\_\_\_\_ r = \_\_\_\_\_\_ Formula:  12. 3, -6, 12, -24, 48, … = \_\_\_\_\_\_ r = \_\_\_\_\_\_ Formula:  13. 1, 3, 9, 27, … = \_\_\_\_\_\_ r = \_\_\_\_\_\_ Formula: |
| 14. Use the formula from question #13 to find the value of the fifth term and the twelfth term. |