

MATH 110 - SECTION 3

Practice with recursive sequences

Name: _____

This is not required homework, though you may turn it in to replace a low score on another homework assignment. There is probably not enough room on this page for all of your work, so feel free to write up your work on separate pages.

Write each sequence as a recursive sequence

1. $a_n = 4n + 5$

2. $c_n = 7^{n-1}(-1)^{n+1}$

3. $b_n = 2n + 1$

4. $s_n = 5^n - 1$

5. $c_n = 42^{(-1)^n}$

6. $s_n = \sum_{k=1}^n k$

Write a formula for the n th term of each sequence

1. $c_1 = 3, c_n = 2c_{n-1}$

2. $d_1 = 5, d_n = d_{n-1} - 2$

3. $a_1 = 1, a_n = 2n_{n-1} + 1$

4. $g_1 = 0, g_n = (g_{n-1})^6 - 4(g_{n-1})^5 + g_{n-1}$

5. $c_1 = 8, c_n = \frac{-1}{c_{n-1}}$

6. $b_1 = 256, b_n = \sqrt{\frac{1}{b_{n-1}}}$