

1) Let $f(x) = \lceil 3x \rceil$ and $g(x) = x^2$. Find $(f \circ g)(x)$

$$(f \circ g)(x) = f(g(x)) = f(x^2) = \lceil 3x^2 \rceil$$

2) Find the first 5 terms in the sequence given by $a_n = 2n + 1$, $n = 0, 1, 2, \dots$

n	a_n
0	1
1	3
2	5
3	7
4	9

3) Which of the following apply to the sequence in the previous question? Circle all that apply.

The sequence is increasing

The sequence is decreasing

The sequence is nonincreasing

The sequence is nondecreasing