## Review 3

1. Write O if an entry is true or X otherwise.

	O(n)	$\Omega(n)$	$\Theta(n)$	o(n)	$\omega\left(n ight)$
$\lg n$					
n	О	О	О	X	X
$n \lg n$					
$n \lg^2 n$					
$n^2$					

2. Show  $3n + 1 = O(n^2)$  by the definition of O.

3. V	Write asymptotic	c notation	ns that satis:	fy eac	h relation an	d explain	n why.	
	Transitivity							
ex>	O is transitive	because	f(n) = O(g(n))	) and	g(n) = O(h(n))	implies	f(n) = O(h(n))	•
(2)	Reflexivity							
(3)	Symmetry							
(4)	Transpose sym	metry						