1.(1 pt) Determine whether the sequences are increasing, decreasing, or not monotonic. If increasing, enter 1 as your answer. If decreasing, enter -1as your answer. If not monotonic, enter 0 as your answer.

___ 1. $a_n = \frac{n-4}{n+4}$
___ 2. $a_n = \frac{\sqrt{n+4}}{9n+4}$
___ 3. $a_n = \frac{\cos n}{4^n}$
___ 4. $a_n = \frac{1}{4n+9}$

2.(1 pt) Let $f(x) = \dfrac{x}{x^2+9x+13}$.

A. Find the smallest real number r such that $f(x)$ is decreasing for all x greater than r.

$r =$ _____

B. Find the smallest integer s such that $f(n)$ is decreasing for all integers n greater than or equal to s.

$s =$ _____