

Homework # 30.

Need to know: Def 6.2.1 of pointwise convergence
and def 6.2.3 of uniform convergence.

1) Do # 5.3.5.

2) Negate the definitions 6.2.1 and 6.2.3.

3) Find the pointwise limit of each sequence
of functions below on a given set.

a) $f_n(x) = \frac{x}{1+x^n}$, $x \in [0, \infty)$, $n \in \mathbb{N}$

b) $g_n(x) = \frac{x^n - n}{x^n + n}$, $x \in (-1, +\infty)$, $n \in \mathbb{N}$.

c) $h_n(x) = \frac{nx^2}{1+nx^3}$, $x \in [0, +\infty)$, $n \in \mathbb{N}$.