Problem 7

Let $\omega(n)$ denote a function such that $\omega(n) \to \infty$ as $n \to \infty$ but $\omega(n) = o(\ln \ln n)$ (i.e. it tends to infinity rather slowly). Prove that if $np = \ln n + \ln \ln n - \omega(n)$ then aas the minimum degree of $G(n,p)$ is 1, while for $np = \ln n + \ln \ln n + \omega(n)$ aas the minimum degree of $G(n,p)$ is 2.

Can you guess when the minimum degree of $G(n,p)$ will reach k for a given $k \geq 3$?