Vertex Degrees in Outerplanar Graphs

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For an outerplanar graph on n vertices, we determine the maximum number of vertices of degree at least k. For $k = 4$ (and $n \geq 7$) the answer is $n-4$. For $k = 5$ (and $n \geq 4$), the answer is $\lfloor 2(n-4)/3 \rfloor$ (except one less when $n \equiv 1 \mod 6$). For $k \geq 6$ (and $n \geq k+2$), the answer is $\lfloor (n-6)/(k-4) \rfloor$. We also determine the maximum sum of the degrees of s vertices in an n-vertex outerplanar graph and the maximum sum of the degrees of the vertices with degree at least k.