Balanced 3-nearly Platonic Graphs

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A balanced 3-nearly Platonic graph of type (k, d) is a k-regular planar graph with three faces of degree m, and all remaining faces of degree $d \neq m$. Based on such graphs with small order, we construct infinite classes of balanced 3-nearly Platonic graphs for each possible (k, d). We also investigate the relationship between this kind of graphs and Platonic graphs. This research answers a recent question by Keith, Froncek and Kreher.

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