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The search for exoplanets around Sun-like stars has unearthed a multitude of planetary systems quite unlike our own. In particular the discovery of compact multi-systems of massive super-Earths/mini-Neptunes orbiting very close to their host stars presents us with features that are not exhibited by our Solar System. So does their vicinity to first-order mean motion commensurabilities, which is observed in extrasolar systems (especially wide of the 2:1 and 3:2 period ratios) but still poses many fundamental questions. We investigate systems of planets in first-order mean motion resonance using analytical and numerical investigations to obtain some insight on their dynamics. We study for two resonant coplanar planets the limits of stability in terms of the planetary mass, assumed equal for simplicity: we show that resonant systems are more stable than non-resonant ones in terms of actual minimal distance measured in mutual Hill radii, but that the latter still plays a role in the onset of instability. Also, we examine the role of tidal dissipation in observed systems of three planets, to assess if this dynamical mechanism can explain their observed orbital configuration, and show its applicability for at least three cases. Future space observatory missions such as the PLATO mission will provide abundant data to analyse and reinforce our understanding of planetary system dynamics.