3/2-transitive groups

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This talk is on work in progress with Michael Giudici, Martin Liebeck, Cheryl Praeger, and Jan Saxl. A transitive permutation group G acting on a finite set Ω is said to be *3/2-transitive* if the stabiliser G_ω of a point $\omega \in \Omega$ has orbits on $\Omega \backslash \{\omega\}$ all of the same size. Clearly a 2-transitive group is 3/2-transitive, and there exist other interesting examples of such permutation groups. In this talk, the speaker will outline the steps needed in order to classify the 3/2-transitive groups, and what has been done thus far.