Names: _____

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Group Activity 9 **Due:** In class, September 21st

1. Based on selection rules, which γ-decay types could link the $3/2^+$ state at ~4MeV in ^{19}Ne to the $1/2^+$ ground state?

2. Calculate Weisskopf estimates for $t_{½}$ for the transitions described in Problem 1. Compare your answers to the experimental limit provided on the NNDC webpage.

3. As you know, $\alpha \propto Z^3$ …so why on earth does ^{16}O exhibit significant internal conversion (IC) from the first excited state?