The local diner has 6 options for the entree, and 11 options for the sides of which 2 are desserts.

1. How many possible plates are there, assuming you get 1 entree and there’s no restriction on the sides?

\[ 6 \times 2^{11} \]

2. How many possible plates are there, assuming you choose 2 entrees and up to 2 sides?

\[ \binom{6}{2} \times \left( \binom{11}{0} + \binom{11}{1} + \binom{11}{2} \right) \]

3. How many possible plates are there, assuming you choose 5 sides, where a dessert counts as a double-side?

\[ \binom{9}{5} + \binom{9}{3} \binom{2}{1} + \binom{9}{1} \binom{2}{2} \]