

MA 6.101

Probability and Statistics

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Surprize Quiz

Just Kidding!

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- ▶ What if the alphabets and numbers are not to repeat?

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- ▶ How many functions defined on n points are possible if each functional value is either 0 or 1?

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- ▶ But we don't want to distinguish the P's and E's.
- ▶ For every indistinguishable arrangement, say PPPREE, there are $3! \times 2!$ different distinguished arrangements.
- ▶ Using principles of counting, the number of indistinguishable arrangements are $\frac{6!}{3!2!1!}$

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- ▶ $\frac{n!}{n_1!n_2!(n-n_1-n_2)!} \left(\frac{1}{6}\right)_1^n \left(\frac{1}{6}\right)_2^n \left(\frac{1}{6}\right)^{(n-n_1-n_2)}$

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