

Exercise Eight: Over/Under

Some colleges to which one might apply are the following.

$\underbrace{\text{Yale, Colby, Bowdoin, Wisconsin}}_{\text{safety schools}}, \underbrace{\text{Harvard, Bates}}_{\text{top choices}}$

More on those easily forgotten exponent rules. As before, we let $m, n \in \mathbb{N}$.

$$\frac{a^m}{a^n} = \frac{\overbrace{a \cdot a \cdot \dots \cdot a}^{m \text{ times}}}{\underbrace{a \cdot a \cdot \dots \cdot a}_{n \text{ times}}} = a^{m-n}$$

$$(a^m)^n = \underbrace{(a \cdot a \cdot \dots \cdot a) (a \cdot a \cdot \dots \cdot a) \dots (a \cdot a \cdot \dots \cdot a)}_{n \text{ times}} = a^{mn}$$

If A and B are finite sets, then $A \cap B = \emptyset \iff \overline{\overline{A} + \overline{B}} = \overline{\overline{A \cup B}}$