

Advanced Counting by Khan



<https://www.khanacademy.org/computing/pixar/crowds/crowds2/v/combinatorics6>

Pixar's Dinosaur Movie

- Pixar is working on an upcoming movie which requires large crowds of dinosaurs.
- If you have 3 different heads, 3 different tails and 2 different bodies how many different dinosaurs could you make?
- If you have 3 different heads, 2 different tails, 1 body and 2 different pairs of arms how many different dinosaurs could you make?
- The director has requested enough parts so that exactly **1000** different dinosaurs can be made. Each dinosaur should be made out of exactly 5 parts: head, body, arm pair, leg pair & tail. No more, no less. Remember, a dinosaur is said to be **different** if at least one body part is different.
- If the total number of parts to be rendered determines the cost of production, who has the lowest cost?