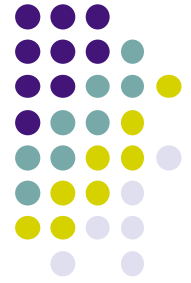


Principle of communicating vases



- We invent a formula that splits the work into two parts:
 - $n! = i! * a$
- We start with $i=n$ and $a=1$
- We decrease i and increase a , keeping the formula true
- When $i=0$ then a is the result
- Here's an example when $n=4$:
 - $4! = 4! * 1$
 - $4! = 3! * 4$
 - $4! = 2! * 12$
 - $4! = 1! * 24$
 - $4! = 0! * 24$

