

# Better Ways To Count



# go figure

Sometimes 1-2-3 just isn't enough.

What do you do when you're trying to find the number of ways to arrange 6 people in a line? Or when you're counting the number of ways to pick 2 ice cream flavors out of 14? Or when you're figuring out how many ways a pinball might fall to the bottom of the pinball machine?

Maybe 1-2-3 doesn't solve the problem in these cases, but math can still help us find the answers!

The first tool we can add to our toolbox is **factorials**. From there we can tackle problems of **choosing**, which will help us when we **count paths**. These ideas can help us understand a very important and beautiful mathematical structure called **Pascal's Triangle**.

Good luck! Counting is about to become very exciting!