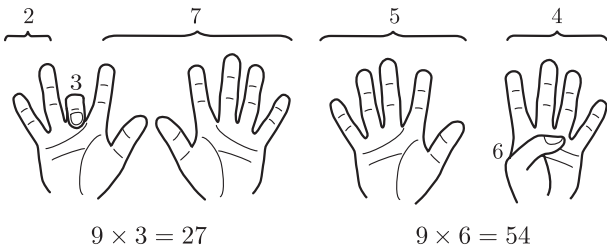


## MathSnacks Finger Food

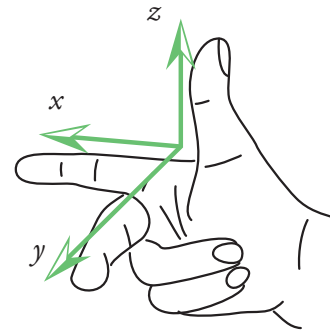
by Marty Ross,  
Burkard Polster,  
and QED (the cat)

### Finger Magic



In the wonderful maths movie *Stand and Deliver*, the star teacher Escalante explains an easy way to multiply one-digit numbers by 9. For example, to calculate  $9 \times 3$  start by holding your fingers splayed and fold in the third finger from from the left. Then there are 2 fingers to the left of this finger and 7 on the right. So, the answer is 27. The trick works because the sum of the digits in the answer is always 9.

### Right Hand Rules



If you label the axes of a coordinate system randomly using the three letters  $x$ ,  $y$ , and  $z$  there is a fifty percent chance that you end up with a right-handed coordinate system as shown. Alternatively you may end up with a left-handed coordinate system, which is the mirror image of a right-handed system. Most coordinate systems shown in books and used in practice are (by convention) right-handed, and the right-hand rule is a good way to remember what such a coordinate system looks like.

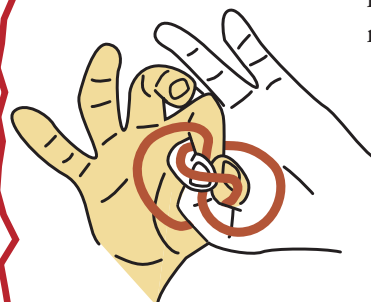
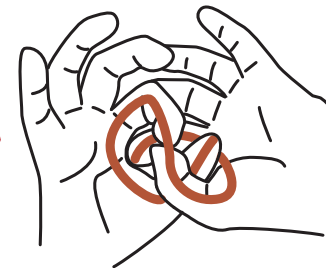
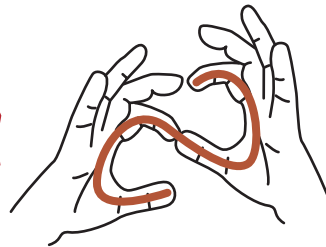
### Binary Digits



01001=9      00100=4      11011=15

Using just one hand and the binary number system you can count from 0 to 31. Here a folded finger stands for a 0 and a stretched out finger for a 1. The only real problem with using this powerful system of counting is the number 4. Can you see why? And, up to what number can you count like this if you are allowed to use two hands?

### Finger Knot



When you cross your arms, your shoulders together with your arms begin to form a knot. However to join your hands and make this into a closed mathematical knot you would have to be a contortionist. On the other hand, using only the forefingers and thumbs of your hands you can form the simplest of the mathematical knots.



## Ripper Reference

E. M. Lieberthal, *The Complete Book of Finger Math*, McGraw-Hill (we have not read this book)

Become a patron of Magic Fingers today: Get access to exclusive content and experiences on the world's largest membership platform for artists and creators. Once upon a time, there was a boy. He dreamed of creating worlds, characters, and writing interesting stories. Use your magic touch and surroundings to take out your foes! Defeat your enemies by throwing other enemies! Use explosive barrels to make a big impact! Sent your adversaries off the platform into the deep! In this action you choose how you control the environment and can freely pick up anything you see. Use your finger to become the ultimate magic user! 4,876 finger magic products are offered for sale by suppliers on Alibaba.com, of which acrylic gloves & mittens accounts for 8%, other toys & hobbies accounts for 3%, and magic tricks accounts for 2%. A wide variety of finger magic options are available to you, There are 3,853 suppliers who sells finger magic on Alibaba.com, mainly located in Asia. The top countries of suppliers are China, Pakistan, and Thailand, from which the percentage of finger magic supply is 98%, 1%, and 1% respectively. Related Search Finger magic - 180 products on Joom. If you're looking for high-quality and affordable finger magic - you'll find the best finger magic at great prices on Joom - from 3 to 11 USD. A wide range of available colours in our catalogue: Gray, Blue, Black, Red, Gold, Multicolor, White, Green, Pink, Beige, Purple. Only high-quality materials: Metal, Plastic, Silicone, Ceramic, Emulsion; and popular brands: Pyrex. Our advantages. Easy and fast returns.