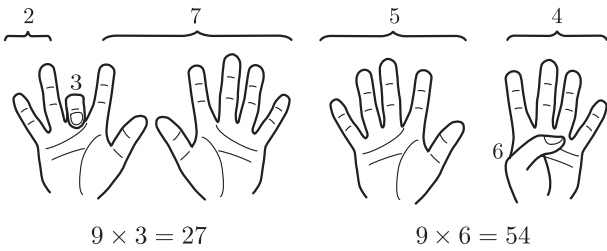


## MathSnacks Finger Food

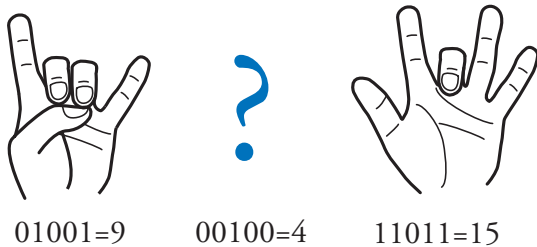
by Marty Ross,  
Burkard Polster,  
and QED (the cat)

### 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.

### Binary Digits

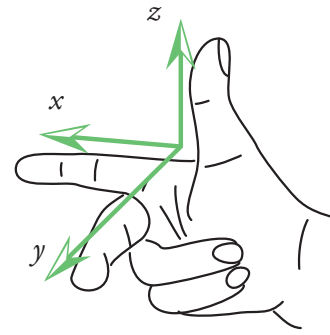


Using just one hand and the binary number system you can count from 0 to 31. Here a folded finger stands for a 0 and a stretched out finger for a 1. The only real problem with using this powerful system of counting is the number 4. Can you see why? And, up to what number can you count like this if you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

## Ripper Reference

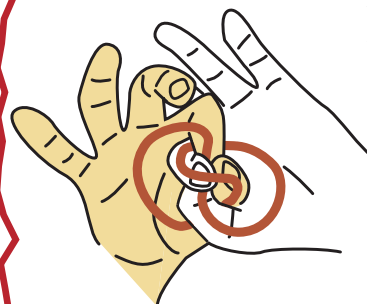
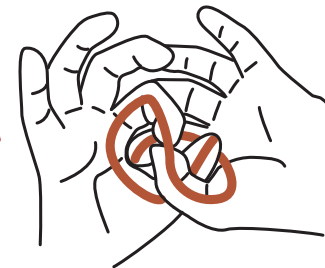
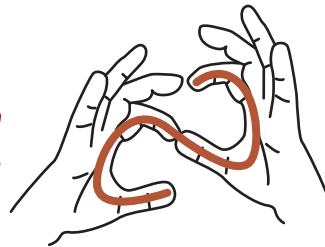
E. M. Lieberthal, *The Complete Book of Finger Math*, McGraw-Hill (we have not read this book)

### 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.

### 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.



The Magic Finger is a fantasy story written by Roald Dahl in 1962. It was first published in the United States, by Harper & Row in 1966, as a picture book illustrated by William Pène du Bois. Allen & Unwin published a Pène du Bois edition in the U.K. in 1968. Later editions have been illustrated by Pat Marriott, Tony Ross, and Quentin Blake. The novel was adapted into a 1990 TV special. Find great deals on eBay for finger magic. Shop with confidence. 2 SEALED Party Magic Finger Smoke Magician Illusion Wizard Witch Mist USA SELLER. Brand New. C \$5.23. Top Rated Seller. Top Rated Seller. or Best Offer. From United States. 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. The Magic Finger is a children's story published by Roald Dahl in 1966. Different editions were illustrated by William Pene du Bois, Tony Ross, and Quentin Blake. The story is about an eight-year-old girl, whose name is never mentioned, who hates hunting, particularly from the neighbouring Gregg family. She tries to talk the Greggs out of it, but either they laugh at her, or they ignore her completely. What they don't know is that the girl has a magic finger. With this magical finger, she can curse 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.