

Physician



What do Physicians do?

Physicians diagnose and treat injuries or illnesses. They examine patients; take medical histories; prescribe medications; and order, perform, and interpret diagnostic tests. They counsel patients on diet, hygiene, and preventive healthcare.

Physicians work in one or more of several specialties, including anesthesiology, family and general medicine, general internal medicine, general pediatrics, obstetrics and gynecology, psychiatry, and surgery.



When Is Math Used?

Doctors and nurses use math when they write prescriptions or administer medication. They also use math when drawing up statistical graphs of epidemics or success rates of treatments. Numbers provide an abundance of information for medical professionals. It is reassuring for the general public to know that our doctors and nurses have been properly trained by studying mathematics and its uses for medicine.

“Evidence-based medicine, the use of statistical models to guide diagnosis and treatment, is already changing how doctors practice.”

-Ian Ayres



Math problem

A mother wants to check if her 9 month old baby is properly growing, so she takes her kid to a pediatrician. She is planning to knit special pjs for the baby's first birthday, so she asks the doctor to predict the number of centimeters that her baby is expected to grow in the next three months.

How can the doctor help this mom?

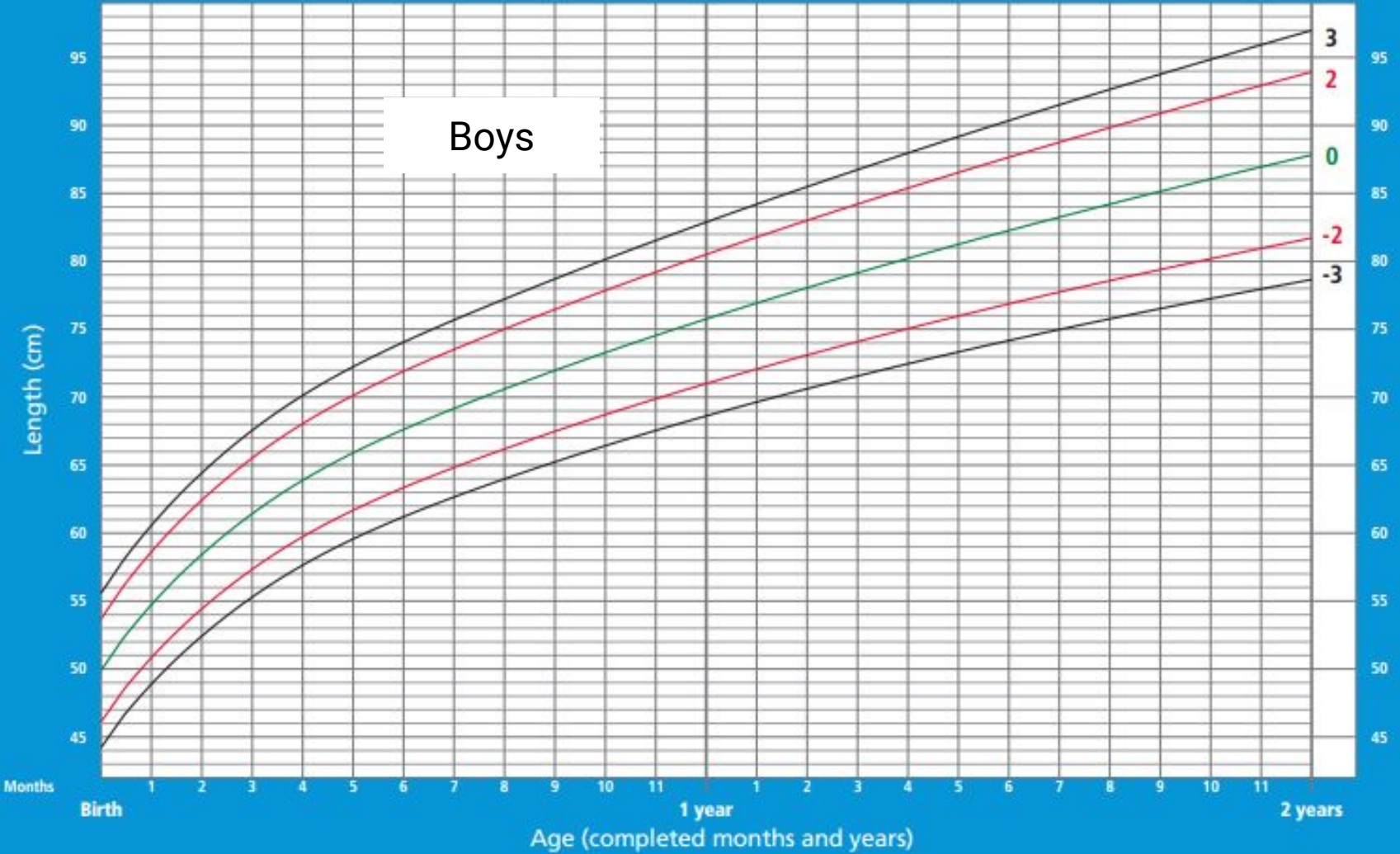
Math problem

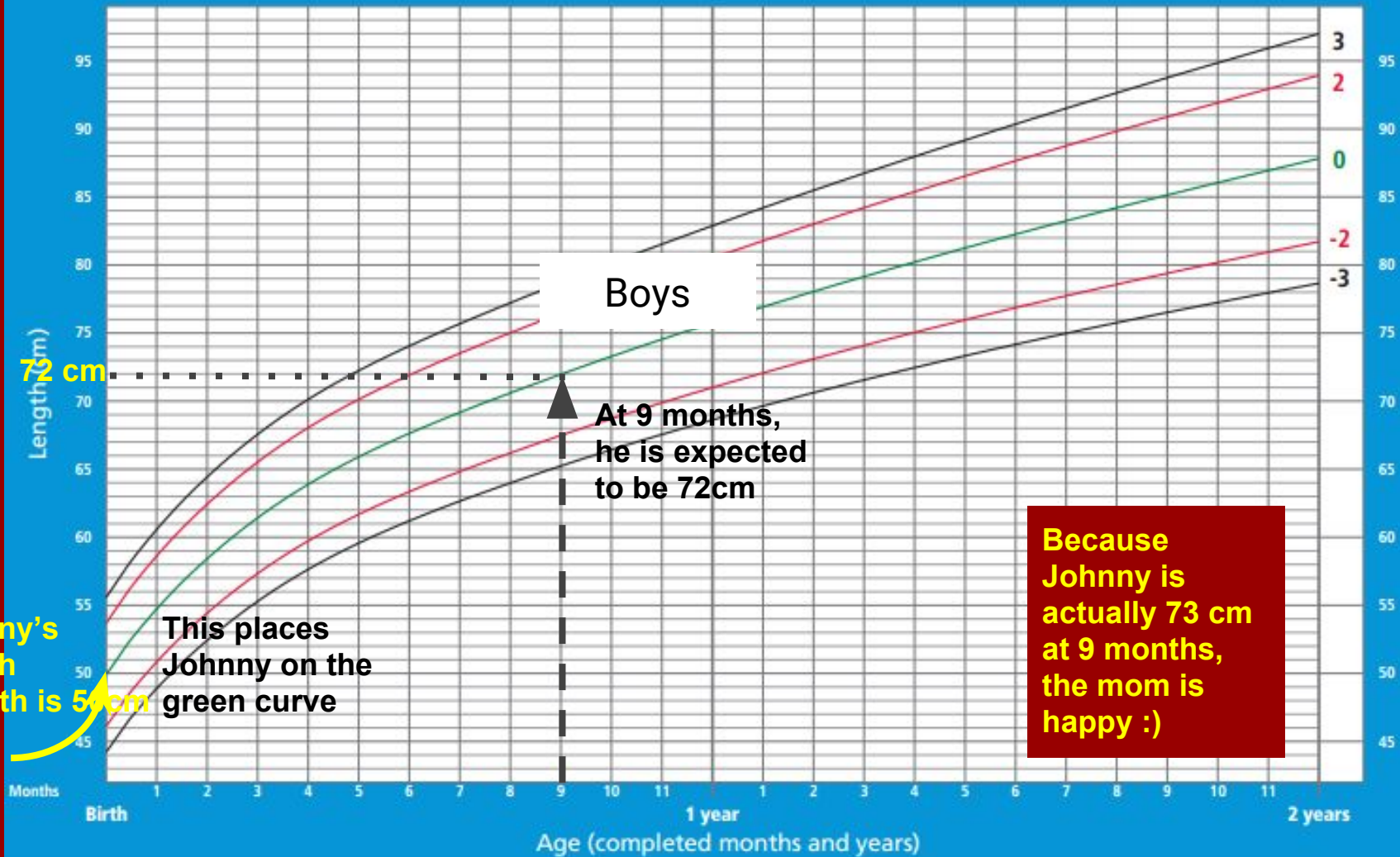
First, the doctor measures the length (height) of the baby: he is now 73 cm.

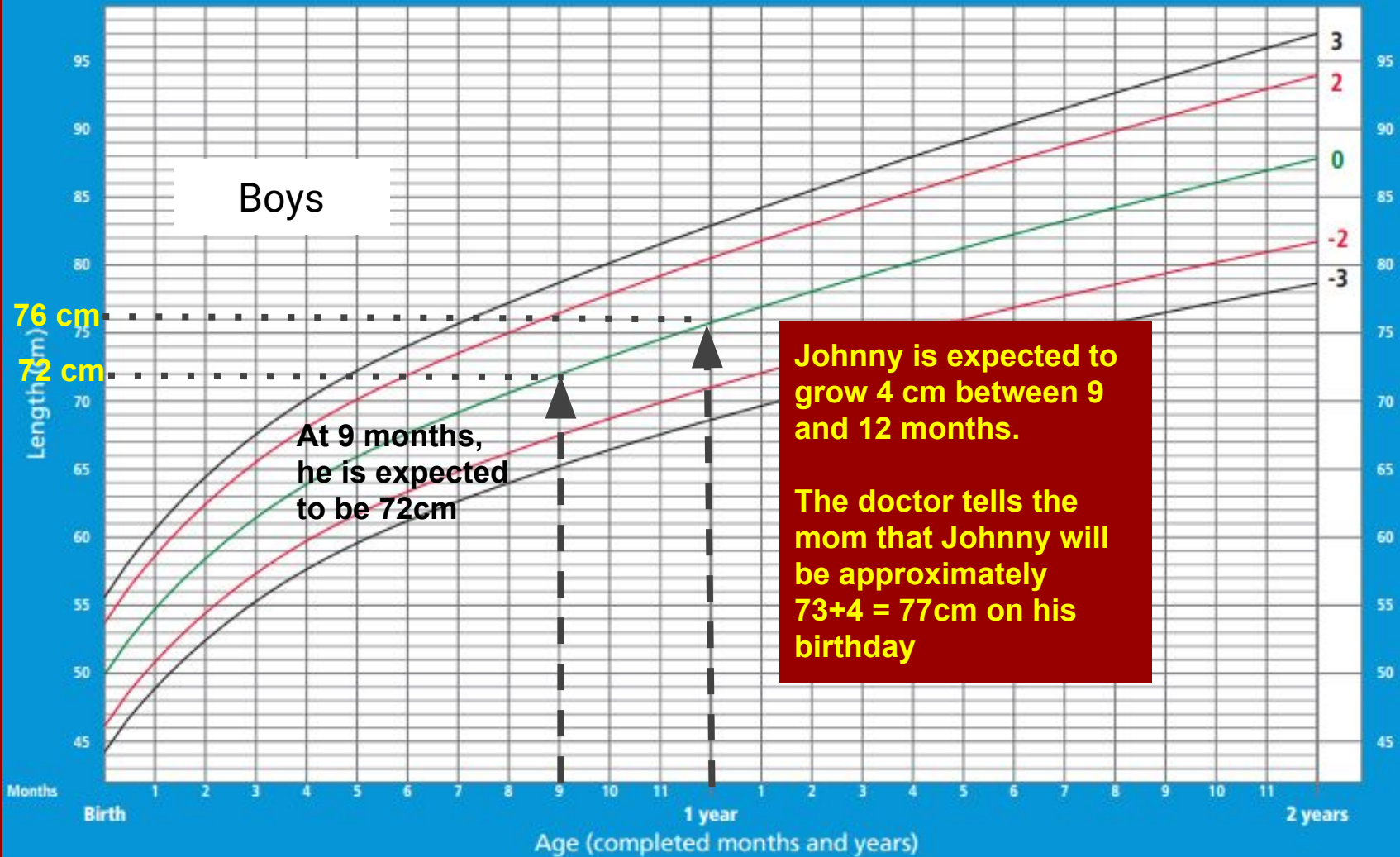
Then, he asks the mom if she remembers the length of baby at birth. And of course she remembers... Little Johnny was exactly 50 cm at birth.

Then, he shows Johnny's mom a big chart...

Boys

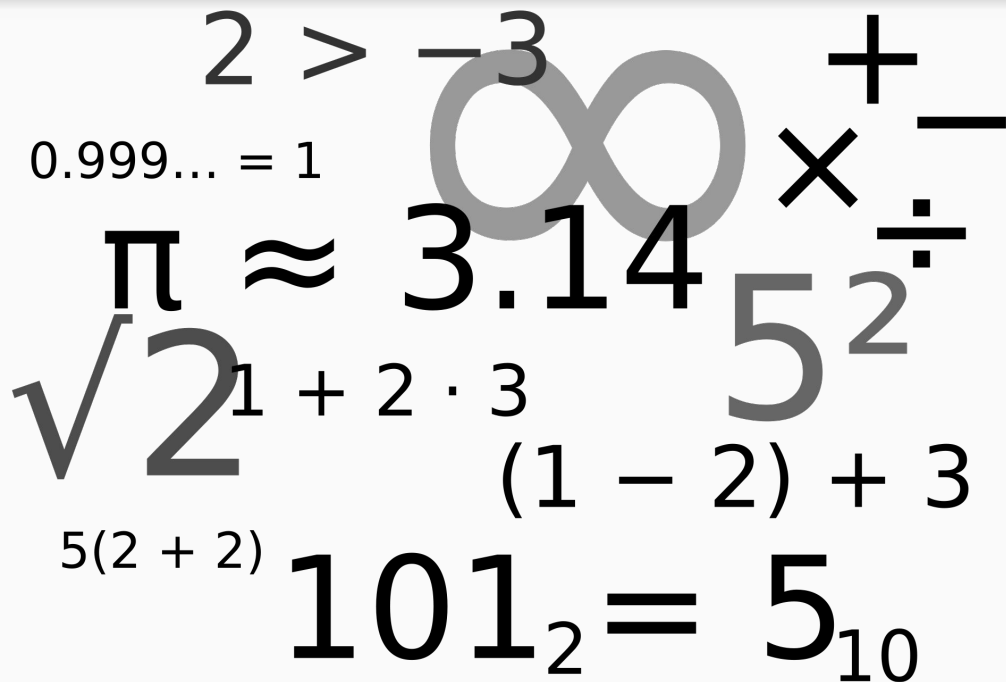






Required Math

- College Algebra
- Trigonometry
- Calculus I & II
- Linear Algebra
- Statistics and Probability
- In addition, each med school had their own math requirements

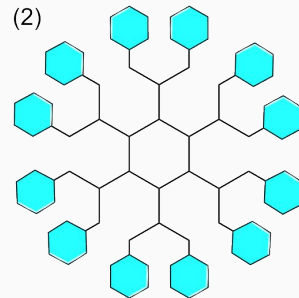
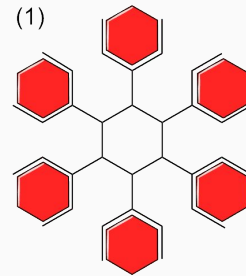
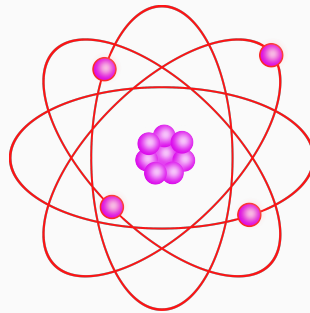
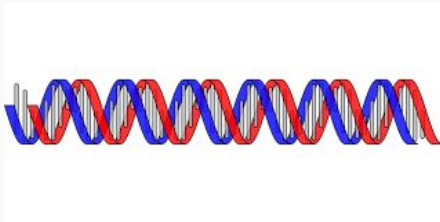
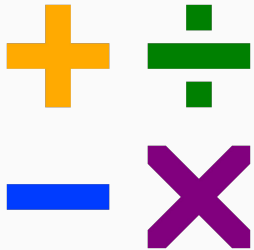


A collage of mathematical symbols and equations. At the top, the inequality $2 > -3$ is shown. Below it, the repeating decimal $0.999... = 1$ is displayed. The Greek letter π is followed by an approximation symbol \approx and the value 3.14 . A large, faint infinity symbol ∞ is in the background. To the right, there are symbols for addition $+$, subtraction $-$, multiplication \times , and division \div . Below these, the square root of 2 $\sqrt{2}$ is shown. Further down, the expression $1 + 2 \cdot 3$ is written. To the right of that is the number 5 with a superscript 2, 5^2 . Below 5^2 is the expression $(1 - 2) + 3$. At the bottom, the binary-to-decimal conversion $101_2 = 5_{10}$ is shown.

Education Needed

Becoming a doctor requires more training than most other jobs. It usually takes at least 11 years to become a doctor: 4 years of college, 4 years of medical school, and 3 years working in a hospital.

To become a doctor, you should study mathematics, biology, chemistry, physics, and English.



Works Cited

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