A big search on mathematicians
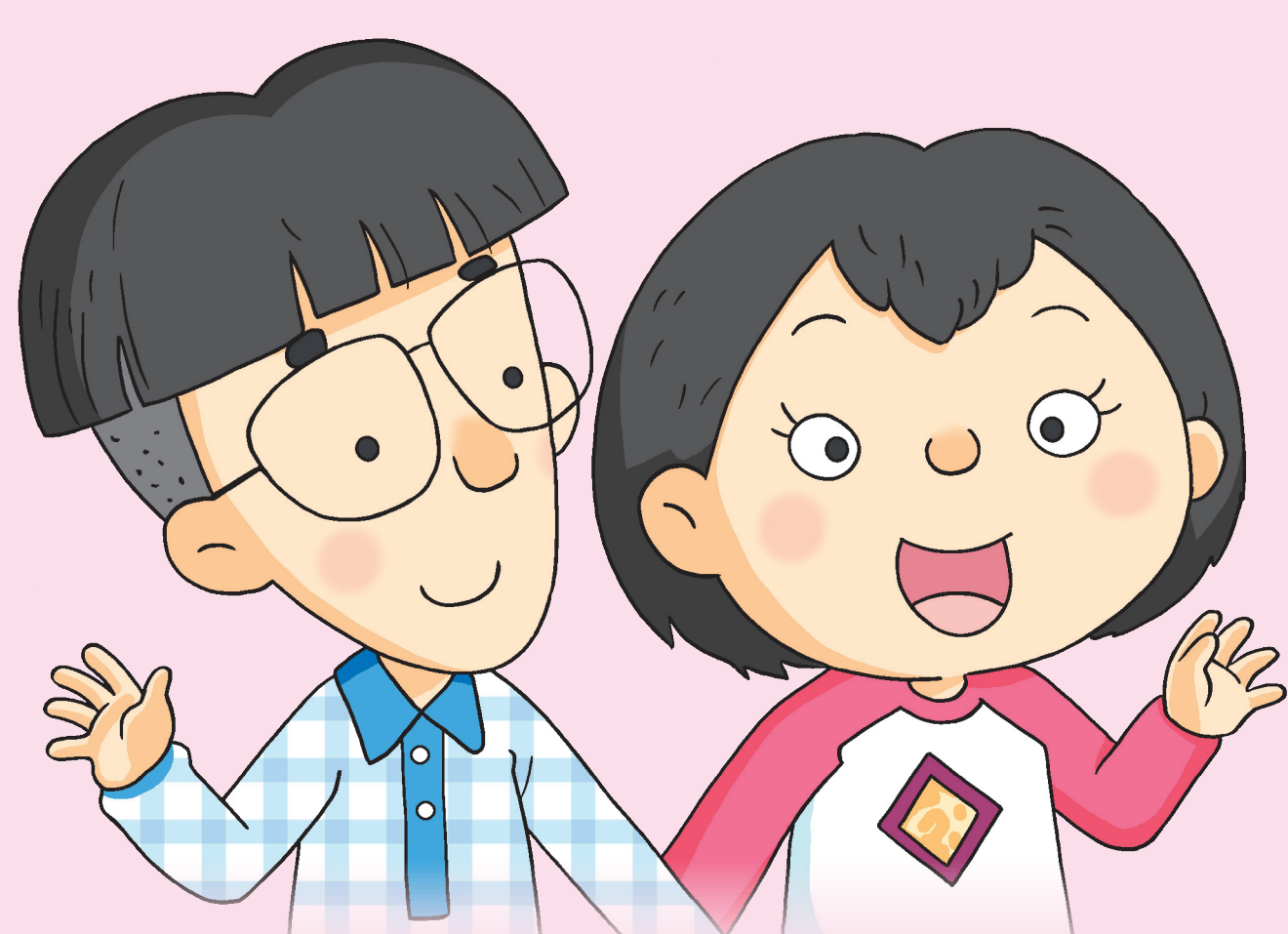
Hey classmates, do you know these mathematicians? Do you know their achievements in mathematics? Let's take a look!

Zu Chongzhi (祖沖之) (429 – 500)

He is an ancient Chinese mathematician, scientist, astronomer and inventor of machines. In 460 A.D., Zu Chongzhi used dissection of a circle to calculate the value of pi (π) and found it lied between 3.1415926 and 3.1415927. This was the first time in the world to find the value of pi to seven decimal places, earlier than what the westerners did by a thousand years. Zu also derived an approximate value of pi, which differs from its actual value by less than one in ten thousand.

Euclid (歐幾里德) (about 330 B.C. to 275 B.C.)

He is a very famous ancient Greek mathematician, well known for his mathematical masterpiece "Elements" (幾何原本). The "Elements" consists of 13 books, which includes a total of 467 important mathematical theorems and covers the geometry of triangles, circles, different types of quadrilaterals and 3-D solids. The "Elements" is considered as the earliest mathematical publications using an axiomatic approach. At a later stage, people called the geometrical knowledge described in the "Elements" as Euclidean Geometry.

René Descartes (笛卡兒) (1596 – 1650)

He is a very famous French philosopher, mathematician, physicist and natural scientist. In his publication "La Géométrie" (Geometry), Descartes put together the good points of geometry and algebra, and proposed the main ideas and methods of analytical geometry. This marked the birth of analytical geometry. Descartes was also the first person to suggest using *a, b, c, …, x, y, z,* etc. to stand for algebraic symbols.

Carl Friedrich Gauss (高斯) (1777 – 1855)

He is a great German mathematician, astronomer and physicist. Gauss's researches covered almost every branch of mathematics, making unprecedented contributions in areas such as number theory, algebra, non-Euclidean geometry, complex analysis, differential geometry, etc. He had also made use of mathematics in researches on astronomy, geophysics and electrostatics. When he was 20 years old, Gauss proved the "Fundamental Theorem of Algebra" which made him reputable in the field of mathematics and also earned him the fame as the "Prince of Mathematics".

Hua Luogeng (華羅庚) (1910 – 1985)

He is a well known Chinese mathematician in recent period. After his graduation from junior secondary school, he studied in a pre-vocational school in Shanghai for only one year and had to leave school due to family's financial difficulty. In 1930, he published an article on methods of solving algebraic equations in the "Science Journal" in Shanghai. This article had impressed Prof. Xiong Qinglai (熊慶來) of Tsinghua University (清華大學) so much that Prof. Xiong invited him to work in the university. From there, Hua started his academic career and his research results had make excellent contributions in many branches of mathematics. While Hua was doing academic researches, he also emphasised strongly on applications of mathematics, and letting the general public know and learn about mathematics. Under his influence and guidance, many people became famous mathematicians.