

# Mathematics subject information



**ASSIGN  
BUSTER**

Who invented the mathematics?? Mathematics (from Greek "knowledge, study, learning") is the study of quantity, structure, space, and change.

Mathematicians seek out patterns and formulate new conjectures.

Mathematicians resolve the truth or falsity of conjectures by mathematical proof. The research required to solve mathematical problems can take years or even centuries of sustained inquiry.

Since the pioneering work of Giuseppe Peano (1858-1932), David Hilbert (1862-1943), and others on axiomatic systems in the late 19th century, it has become customary to view mathematical research as establishing truth by rigorous deduction from appropriately chosen axioms and definitions. When those mathematical structures are good models of real phenomena, then mathematical reasoning often provides insight or predictions. Through the use of abstraction and logical reasoning, mathematics developed from counting, calculation, measurement, and the systematic study of the shapes and motions of physical objects.

Practical mathematics has been a human activity for as far back as written records exist. Rigorous arguments first appeared in Greek mathematics, most notably in Euclid's Elements. Mathematics developed at a relatively slow pace until the Renaissance, when mathematical innovations interacting with new scientific discoveries led to a rapid increase in the rate of mathematical discovery that continues to the present day. Who invented the addition sign?? The plus or addition sign was invented by Michael Stiple in 1544.

**MULTIPLICATION OF FRACTIONS** Multiply the top numbers (the numerators). Multiply the bottom numbers (the denominators). Simplify the fraction if needed. The reciprocal of a fraction is obtained by interchanging the numerator and the denominator, i. e. by inverting the fraction. **Ratio** It is a relationship between two quantities. **REDUCING RATIO IN LOWEST TERM** To reduce ratio in lowest term divide the given ratio by their GCF. **Proportion** If the product of the means and the extremes are equal they are **PROPORTIONS**. Proportions are 2 equal ratios.

**CHANGING DECIMAL TO FRACTION** To change decimal to fraction, consider the place value of the decimal number. **CHANGING FRACTION TO DECIMAL**

Consider the divisor of the fraction of the denominator is base 10. If the denominator is not base 10, divide the numerator by the denominator.

**Setting up the right proportion** Set up the right proportion. Find the missing proportion. **Partitive proportion** Add shares - share + share total/shares = quotient share x quotient **INTEGERS** When integers go further to left it became bigger.

When integers go further to the right it becomes small. Zero is neither a negative numbers, a positive number is a **SPECIAL NO.** **FINDING THE**

**INTEREST** Principal x interest rate x time = quotient 3 elements of percentage problem  $\text{Percentage/Base} = \text{Rate}$   $\text{Percentage/Rate} = \text{Base}$   $\text{Base} \times \text{Rate} = \text{Percentage}$  Percentage| Discount| Tax| Commission| Base| Marked Price| Sale Price| Total Sales| Rate| Rate of Discount| Tax Rate| Rate Commission| Percentage| Discount| Sale Tax| Commission| | \*Selling/Net Price| \*Total Cost| \*Net Proceeds|