

Meaning of Irrational

Numbers

I believe that every mathematical object directly or indirectly corresponds to some physical situation. Talking about number system, I see that every classification of number is based on some requirement of our everyday life. Natural numbers would have been discovered when man felt the need to count the things. Integers may be positive or negative. This corresponds to the fact that things can be opposite to each other. For example, I can express my gain of 10 Rs by +10 and loss of 10 Rs, which is opposite of gain, by -10. Going in one direction by certain magnitude can be expressed by some positive number and that in opposite direction by same magnitude, negative of that number.

Even-odd classification is based on our ability to divide certain number of things in two equal parts : when I am able to divide certain number of things in two equal parts, I will call it to be even in number. If not, I will call it odd. Ability or inability to divide here means that after division we must get an integer. Question may arise , why 'division by two' is so special that it became a basis of classification of numbers? I think, it is because the 'division by two' is the minimum possible division. (When there were only Adam and Eve, things had to be divided in two parts only. So the numbers required were only even and odd. As their generation continued , the next level of classification came into existence : the rational-irrational classification. joking!)

I think, the Rational-irrational classification has no new Physical basis. It is just a generalization of the even-odd classification. If we are able to divide a number by any other number, it is of one kind; if not it is of opposite kind. Former is named rational and so the later is called irrational. Note that the situation is perfectly analogous to the case of even-odd classification. Odd numbers are like irrational numbers because they come into existence by our inability to divide by 'two', just as irrational numbers come into existence due to our inability to divide certain number by 'any'.