Pure mathematics may hold key to quantum theory. That the lumpiness of energy may be explained on purely mathematical grounds was suggested recently to the meeting of the American Mathematical Society at Columbia University by Prof. Edward Kasner of Columbia, as a result of his studies of curves.

An imaginary or complex mathematical curve, Prof. Kasner said, has a peculiarity that a piece of it can never be made like a straight line no matter how short a piece is taken. Prof. Kasner studied the ratio between the length of a straight line cutting such a curve when the length of the piece cut off is made smaller and smaller, and found some curious things.

In ordinary curves this ratio is one, but in the special cases considered by him the ratio can have only discontinuous values less than one, such as 0.94, 0.86, 0.80, etc. These values become realized when electrons are assumed to shoot out with the velocity of light and measurements are made in the space of Minkowski and Einstein.

Jerkiness of this kind reminds one of the things observed in the quantum theory. Prof. Kasner suggested that there may be some relation between the mathematical fact and the physical quantum laws.—*Science Service*