

## MATHEMATICAL AND PHYSICAL SOCIETY.

The regular meeting of the Mathematical and Physical Society was held in University College Friday afternoon, Mr. R. Henderson, Vice-President, in the chair. The programme announced had attracted a large audience. Prof. Baker read a paper on "Poetic Interpretation in Mathematics." Prof. Baker's object was to show that mathematics appeal to the imagination, to the sense of beauty, and even to the emotions, and that therefore in some of its developments it comes within the regions haunted by the Muses. The question whether the advance of science would destroy poetic feeling was discussed, to be answered in the negative. Prof. Baker proceeded to give examples from his subject to illustrate his position. The human intellect has enabled man to create for himself nothing more exquisite in its structure, or more refined in its applications than the infinitesimal calculus.

The microscope reveals to us an existence of which our senses could take no cognizance; but in a way the calculus steps in when the microscope has ceased to penetrate, and when the mind refuses to conceive the further divisibility of space this wonderful method continues indefinitely its faultless work.

Amongst certain of the ancient mathematical truth had been invested with a certain elevated symbolism. In illustration of this point an extract was read from Kingsley's Hypatia, where the circle is invested with a curious significance. Professor Baker undertook to restore after the fashion of Kingsley what might have formed a page of Hypatia's lost treatises in the conics. Such symbolism may be applied in other cases. The infinite branches of curves typify the immortality of man, and asymptotes may be considered to symbolize divine perfection. And just as the curve continually gets nearer and approximates to the asymptote but yet through infinite space never attains it, so the soul of man in a future state may continually approach divine perfection but yet in the endless roll of eternal years never absolutely attain it.

Such applications may be regarded as little better than an amusing conceit, but yet have as much to recommend them as certain interpretations applied to nature.

The Pythagoreans and Platonists conjectured that the great secret of the universe was to be found in number and form. Only poets could have had such an inspiration, for it was an anticipation of some of the grandest discoveries of Modern Science. What the Greeks divined we prove, and see how nature hymns her numbers through innumerable variations. The Lecturer gave illustrations how the imagination was cultivated in Geometry, especially in curve tracing. He enlarged on the wonderful meanings of the general equations of the second degree, which contains all the properties of the conics. In the lunar theory the longitude of the moon is expressed in a series of terms. Thus the great orb of night as she rolls through space has told her story for ages in a single district; and in the quiet intellectuality of its terms there rests a beauty that equals that of the moonlight itself as it slumbers on a summer sea.

An account was given of the discovery of the planet Neptune by Adams and LeVerrier. It was a triumph of the mathematicians. While the men were at work, at the meeting of the British Association in 1846, Sir John Herschel said: "The past year has given us the probable prospect of the discovery of another planet. We see it as Columbus saw America from the shores of Spain. Its movements have been felt trembling along the far-reaching line of our analysis." The planet appeared on the night of Sept. 24th, 1846, in the place predicted.

The greatest of German writers has presented to us a scholar tired of life and weary of his knowledge summoning to his assistance from the spirit world an uncanny helper. When divested of the garb which genius clothes all it conceives, has this creation of Goethe anything of the poetry and beauty and measure that suggest themselves to us as we think of those mathematicians summon-

ing up their Neptune from the depth of the ocean of infinite space?

It is difficult to overestimate the debt the scientific faculty in general owes to mathematics in the past; in the present also. Mathematical laws in their perfection and simplicity appeal to the aesthete faculty.

## SCHOOL OF SCIENCE.

The engineering Society met on Tuesday, 24th ult., in the School of Science, the President in the chair. Considerable business was disposed of; a report of progress coming from the committee appointed to publish the Society's "Pamphlet."

The business part of the meeting being over, the President called upon Dr. P. H. Bryce, Secretary of the Provincial Board of Health, for the paper on "The Disposal of Sewage by 'Sewage Farms,'" which he had promised the Society and which had been looked forward to with much interest. He dealt with the subject under four heads, viz.: (1) The soil of the farm; (2) the sewage itself; (3) the water and air of the soil, and (4) the temperature. He showed the different methods of arranging the drains, etc., of the farms, according to the character of the soil and the configuration of the surface. As a good example of a sewage farm, in our own province, he described the one at London in connection with the lunatic asylum. These sewage farms, though just recently introduced, have proved satisfactory in every particular, even in cold climates like our own, where it was thought the scheme would be impracticable. On the whole the lecture was very valuable, as the question of sewage disposal is the most important which, at present, the engineer has to deal with. To say that the lecture was highly appreciated is putting it mildly, and the Engineering Society tendered its sincere thanks to the Doctor for his splendid lecture. At the lecture and discussion afterwards the Society was honored by the presence of Mr. Allan McDougall, who gave valuable advice on the subject.

## THE Y. M. C. A.

Sir Daniel Wilson spoke to the Y.M.C.A. last Thursday week on "The Supernatural in Religion." The hall was well filled; the parlor, too, was open and many of the ladies accepted the opportunity of hearing the address.

The speaker said that there was a period of doubt in the minds of most men, especially of those who were pursuing an educational course. He himself had passed through it, and his advice to young men in the midst of the perplexing problems of science was that they should lay hold firmly of the element of faith which is implanted in every man's nature. Prof. Huxley, at one time a friend of the speaker's, had lost sight of this principle in his researches in Natural Science, had denied the supernatural and become the great apostle of agnosticism. The sneering tones in which Prof Huxley couches his criticisms of the Christian religion are unworthy of a gentleman and a man of science, and perhaps indicate secret misgivings at the bottom of his own heart. If our religion comes from God, and God is above nature, how is it possible to conceive that there should be no element of the supernatural in religion? The speaker, as a careful student of historical criticism for over forty years, added his testimony to the authenticity of the New Testament record. Our faith hangs on the resurrection of Christ. "If Christ be not risen then is our preaching vain and your faith is also vain." But the resurrection of Christ has been as clearly proven as any fact in history. The address was listened to with interest and appreciation throughout; and the advice of the scholarly President, who had struggled with the problems of religion and had come out victorious, was welcome to many who are perhaps now passing through the stage of doubts and questionings.