of Āryabhata's "Ganita," and a comment thereon. These are prefaced by brief notes which explain the position occupied by Aryabhata in the history of mathematics. The point of view of the writer differs from that of those who have previously treated the subject in that he holds that it is beyond all doubt that Aryabhata's work owes its origin to the Alexandrian school of mathematicians. Aryabhata does not claim to be the discoverer of the rules he gives, and it is thought that the "Ganita" was intended by him to be supplementary to the mathematical knowledge of the Hindus of his time. The "Ganita" is examined in close detail, and abundantly confirms this hypothesis. The claims that have been made for Aryabhata—that he was the inventor of our modern system of arithmetical notation; that he discovered a more accurate value for π than any of his predecessors; that he was the first to give a systematic solution for indeterminate equations of the first degree—are shown to be unsound (see also p. 347).—Studies in experimental breeding of the Indian cottons: an introductory note: H. Martin **Leake.** Breeding experiments have been undertaken at Cawnpur, and the third generation has now been reached. As a result of numerous measurements of the leaf it has been found that if narrow-lobed and broad-lobed leaved plants be crossed, the proportions of the leaves in the first generation (F1) approximate remarkably to the arithmetic mean of those of the two parents, and this appears to be true for all crosses, whether they be made between the extreme forms of *Gossypium neglectum* or between such divergent types as *G. arboreum* and *G. herbaceum*. In the F2 generation of crosses, plants with typical broad and with typical narrow-lobed leaves appear, just as ascertained laws of heredity teach us to expect. From the way in which intermediates such as have been artificially raised occur naturally in the fields of the United Provinces of Agra and Oudh, it is apparent that cross-fertilisation is common. Further, in illustration it is cited that a packet of seed of *G. arboreum* taken without precautions yielded two out of fourteen plants the parentage of which was obviously impure, and which therefore stand as evidences of natural cross-fertilisation of *G. arboreum* by some other species of Gossypium.

DIARY OF SOCIETIES.

THURSDAY, FEBRUARY 13.

ROYAL SOCIETY, at 4.30.—The Constitution of the Electric Spark: T. Royds.—On the Determination of Viscosity at High Temperatures: Dr. C. E. Fawsitt.—The Effect of Hydrogen on the Discharge of Negative Electricity from Hot Platinum: Prof. H. A. Wilson, F.R.S.—The Decomposition of Ozone by Heat: Dr. E. P. Perman and R. H. Greaves.

ROYAL SOCIETY OF ARTS, at 4.30.—The New Imperial Gazetteer of India: R. Burn.

MATHEMATICAL SOCIETY, at 5.30.—Proof that every Algebraic Equation has a Root: Dr. H. A. de S. Pittard.—On the Uniform Approach of a Continuous Function to its Limit: Dr. W. H. Young.—Note on q-differences: Rev. F. H. Jackson.—An Extension of Eisenstein's Law of Reciprocity (Second Paper): A. E. Western.—Conformal Representation and the Transformation of Laplace's Equation: E. Cunningham.

FRIDAY, FEBRUARY 14.

ROYAL INSTITUTION, at 9.—Biology and History: Dr. C. W. Saleeby.

ROYAL ASTRONOMICAL SOCIETY, at 5.—Anniversary Meeting.

PHYSICAL SOCIETY, at 8.

MALACOLOGICAL SOCIETY, at 8.—Annual Meeting.—President's Address: Malacology *versus* Palæoconchology: B. B. Woodward.

MONDAY, FEBRUARY 17.

ROYAL SOCIETY OF ARTS, at 8.—The Theory and Practice of Clock Making: H. H. Cunynghame, C.B.

VICTORIA INSTITUTE, at 4.30.—Philosophy and Evolution: Prof. H. L. Orchard.

TUESDAY, FEBRUARY 18.

ROYAL INSTITUTION, at 3.—Membranes: Their Structure, Uses and Products: Prof. William Stirling.

ZOOLOGICAL SOCIETY, at 8.30.

ROYAL STATISTICAL SOCIETY, at 5.

INSTITUTION OF CIVIL ENGINEERS, at 8.—Shaft-sinking at the Horden Colliery, South-east Durham: J. J. Prest.—The New York Rapid-transit Subway: W. B. Parsons.

WEDNESDAY, FEBRUARY 19.

GEOLOGICAL SOCIETY, at 8.—Notes on the River Wey: H. Bury.

ROYAL MICROSCOPICAL SOCIETY at 8.—Eye-pieces for the Microscope: E. M. Nelson.—The Life-history of a New Protophyte: Rev. Eustace Tozer.—On Dimorphism in the Recent Foraminifer *Alveolina boscii*: F. Chapman.—*Exhibits*: Slides illustrating the Life-history of some Diptera: C. L. Curties.—An Improved Mercury-Vapour Lamp: J. E. Barnard.

ROYAL METEOROLOGICAL SOCIETY at 7.30.—Formation of Snow Rollers: C. Browett.—Comparison of Ship's Barometer Readings with Those Deduced from Land Observations: E. Gold.

THURSDAY, FEBRUARY 20.

ROYAL SOCIETY, at 4.30.—*Probable Papers*:—Notes on the Application of Low Temperatures to some Chemical Problems. (1) Use of Charcoal in Vapour Density Determination. (2) Rotatory Power of Organic Substances: Sir James Dewar, F.R.S., and Dr. H. O. Jones.—On the Osmotic Pressure of Compressible Solutions of any Degree of Concentration. Part II. Cases in which both Solvent and Solute are Volatile: A. W. Porter.—Effects of Self-induction in an Iron Cylinder when traversed by Alternating Currents: Prof. Ernest Wilson.

ROYAL INSTITUTION, at 3.—Wood: its Botanical and Technical Aspects: Prof. W. Somerville.

INSTITUTION OF MINING AND METALLURGY, at 8.

LINNEAN SOCIETY, at 8.—Experiments with Wild Species of Tuber-bearing Solanums: A. W. Sutton.—The Life-history and Larval Habits of Tiger Beetles (Cicindelæ): Dr. V. E. Shelford.—On a Possible Case of Mimicry in the Common Sole: Dr. A. T. Masterman.—*Exhibit*: Stereoscopic Photographs of Alpine Plants in Natural Colours: T. Ernest Waltham.

INSTITUTION OF ELECTRICAL ENGINEERS, at 8.—Electrical Power in Railway Goods Warehouses: H. Henderson.—Electric Power in Docks: C. E. Taylor.

CHEMICAL SOCIETY, at 8.30.—The Action of Thionyl Chloride and of Phosphorus Pentachloride on the Methylene Ethers of Pyrocatechol Derivatives: G. Barger.—The Preparation of Conductivity Water: H. Hartley, N. P. Campbell and R. H. Poole.—Derivatives of *para*-Diazoiminobenzene: G. T. Morgan and Miss F. M. G. Micklethwait.—A Study of the Diazo-reaction in the Diphenyl Series: G. T. Morgan and Miss F. M. G. Micklethwait.—Organic Derivatives of Silicon. Part VI. The Optically Active Sulphobenzylethylpropylsilicyl Oxides: F. S. Kipping.—A Simple Manometer for Vacuum Distillation: N. L. Gebhard.

FRIDAY, FEBRUARY 21.

ROYAL INSTITUTION, at 9.—The Ether of Space: Sir Oliver Lodge, F.R.S.

INSTITUTION OF MECHANICAL ENGINEERS, at 8.—Annual Meeting.—Tests of a Live Steam Feed-water Heater: Prof. J. Goodman and D. B. MacLachlan.

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