*the limit* log 2 = l-ι- + ∣- i... As a second example, 2 3 4

consider the series 1 *+ z + zi . .,* which for values of *z* be­tween the limits ± 1 (both limits excluded) = y For *z =* +1, the series is divergent and has no sum; but for z=l-f as f diminishes to zero we have and 1 + (1 - ∈)

+ (1 — e)2 .., each positive and increasing without limit ; for *z = — 1* the series is divergent and has no sum ; the equation - - = l- (l-e) + (l-e)2... is true for any

positive value of c however small, but *not* for the value ∈ = 0.

The following memoirs and works may he consulted :—Cauchy, *Cours d'Analyse de l'École Polytechnique—*part i., *Analyse Algébrique,* 8vo, Paris, 1821; Abel, “Untersuchungen über die Reihe 1 + . . ," in Crelle’s *Joum. de Math.,* vol. i.

(1826) pp. 211-239, and *Œuvres* (French trans.), vol. i. ; De Morgan, *Treatise on the Differential and Integral Calculus,* 8vo, London, 1842; Id., “On Divergent Series and various Points of Analysis connected with them” (1844), in *Camb. Phil. Trans.,* vol. viii. (1849), and other memoirs in *Camb. Phil. Trans.* ; Bertrand, “ Règles sur la Convergence des Séries,” in *Liouv. Joum. de Math.,* vol. vii. (1842) pp. 35-54; Cayley, “On the Inverse Elliptic Functions,” *Camb. Math. Journ.,* vol. iv. (1845) pp. 257-277, and “ Mémoire sur les Fonctions doublement périodiques,” in *Liouv. Joum. de Math.,* vol. x. (1845) pp. 385-420 (as to the boundary for a doubly infinite series) ; Riemann, “ Ueber die Darstellbarkeit einer Function durch eine trigonometrische Reihe,” in *Gott. Abh.,* vol. xiii. (1854), and *Werke,* Leipsic, 1876, pp. 213-253 (contains an account of preceding researches by Euler, D’Alembert, Fourier, Lejeune-Dirichlet, &c.) ; Catalan, *Traité Elémentaire des Séries,* 8vo, Paris, 1860; Boole, *Treatise on the Calculus of Finite Differ­ences,* 2d ed. by Moulton, 8vo, London, 1872. (A. C.)

SERINGAPATAM, formerly the capital of Mysore, India, is situated on an island of the same name in the Kaveri (Cauvery) river in 12° 25' 33" N. lat. and 76° 43' 8 ' E. long. It is chiefly noted for its fortress, which figured so prominently in Indian history at the close of the 18th century. This formidable stronghold of Tipu Sultan thrice sustained a siege from the British, but it was finally stormed in 1799 ; and after its capture the island was ceded to the British. The island of Seringapatam is about 3 miles in length from east to west and 1 in breadth, and yields valuable crops of rice and sugar-cane. The fort occupies the western side of the island, immediately overhanging the river. Seringapatam is said to have been founded in 1454 by a descendant of one of the local officers appointed by Rámánuja, the Vishnuite apostle, who named it the city of Srí Ranga or Vishnu. At the eastern or lower end of the island is the Lal Bagh or “ red garden,” containing the mausoleum built by Tipu Sultan for his father Hyder Ali, in which Tipu himself also lies. In 1881 the population of the town of Seringapatam was 11,734 (males 5579, females 6155).

SERJEANT-AT-LAW is the name given to one who holds an ancient and honourable rank at the English or Irish bar. The word is a corruption of *serviens ad legem,* as distinguished from *apprentidus ad legem,* or utter barrister, who probably originally obtained his knowledge of law by serving a kind of apprenticeship to a serjeant. When the order of serjeants was instituted is unknown, but it certainly dates from a very remote period. The authority of serjeant counters or countors (i.e., pleaders, those who frame counts in pleading) is treated in the *Mirror of Justices,* and they are named in 3 Edw. I. c. 29. They may possibly have been the representatives of the *conteurs* mentioned in the great customary of Normandy. The position of the serjeant had become assured when Chaucer wrote. One of the characters in the *Canterbury Tales* is

“ A serjeant of the law, wary and wise,

That often had y-been at the parvis. ” @@1

Serjeants (except king’s serjeants) were created by writ of summons under the great seal, and wore a special and dis­tinctive dress, the chief feature of which was the coif, a white lawn or silk skull-cap, now represented by a round piece of black silk at the top of the wig. They enjoyed a social precedence after knights bachelors and before companions of the Bath and other orders. In this they differed from queen’s counsel, who have simply professional as distinguished from social rank. Socially the serjeant had precedence, professionally the queen’s counsel, unless indeed, as was often the case, a patent of precedence was granted to the former. Till past the middle of the 19th century, a limited number of the serjeants were called “ king’s (queen’s) serjeants.” They were appointed by patent and summoned to parliament. Until 1814 the two senior king’s serjeants had precedence of even the attorney- general and solicitor-general. It was the custom for serjeants on their appointment to give gold rings with mottoes to their colleagues. Down to 1845 the order en­joyed a very valuable monopoly of practice. The serjeants had the right of exclusive audience as leading counsel in the Court of Common Pleas. In 1834 a royal mandate of William IV. attempted to abolish this privilege, but in 1840 the judicial committee of the privy council declared the mandate informal and invalid. The monopoly was finally abolished in 1845 by Act of Parliament (9 and 10 Vict. c. 54). For at least 600 years the judges of the superior courts of common law were always serjeants. If a judge was appointed who was not a serjeant at the time of his appointment, he was formally created one immedi­ately before his elevation to the bench. By the Judicature Act, 1873, sect. 8, no person appointed a judge of the High Court of Justice or the Court of Appeal is required to take or have taken the degree of serjeant-at-law. The serjeants had their own inn of court down to a very recent date. Serjeants’ Inn was formerly in two divisions, one in Fleet Street and one in Chancery Lane. In 1758 the members of the former joined the latter. In 1877 the latter was dissolved, the inn sold to one of the members, and the proceeds divided among the existing serjeants. The extinc­tion of the order is now only a question of time, no serjeant having been created since 1868. It is, however, still with­in the discretion of the crown to create fresh serjeants if ever it should be deemed advisable to do so. In Ireland the order still exists. The three serjeants at the Irish bar have precedence next after the law officers of the crown.

See *Serviens ad Legem,* by Mr Serjeant Manning ; *The Order of the Coif,* by Mr. Serjeant Pulling.

SERJEANTY, a form of tenure. See Real Estate.

SERPENT, a musical instrument. See Ophicleide, vol. xvii. p. 778.

SERPENTINE, a compact crypto-crystalline or fibrous mineral substance, occurring in rock-masses which com­monly present dark green colours, variously mottled and fancifully compared to the markings on certain serpents, whence the name “serpentine.” For a like reason it is some­times called “ ophite,” while Italian sculptors have termed it “ranocchia,” in allusion to its resemblance to the skin of a frog. In consequence of its variegated tints, the stone is frequently cut and polished for ornamental purposes, and is hence popularly called a marble. From true marble, however, it differs in chemical composition, being essen­tially a hydrated silicate of magnesium, usually associated with certain metallic oxides (such as those of iron, nickel, and chromium) which confer upon the stone its character­istic tints. In some localities serpentine is found in

@@@1 The parvis was the porch of old St Paul’s, where each serjeant had his particular pillar at which he held interviews with his clients.