to graphic arithmetic, in which there are both questions and examples on multiplication, division, addition, subtraction, fractions, involution, &c.

Throughout the book the figures are placed on the right-hand pages, and the text opposite them on the left—a very good arrangement. The diagrams and figures are neat and clear, especially the complicated figures required in the drawing of sections of some solids. The exercises have been selected from the papers of the Science and Art Department, College of Preceptors, Oxford and Cambridge Locals, and various Military Colleges. They are carefully graduated, and, when necessary, hints have been added to facilitate their solution.

Madagascar; or, Robert Drury's Journal. Edited by Captain P. Oliver. (London: Fisher Unwin, 1890.)

THIS book may be divided into three parts: Captain Oliver's introduction and notes, Robert Drury's journal, and a description of the island by the Abbé Rochon. In the first part Captain Oliver tries to prove that the journal is more or less fictitious. At the beginning of the introduction he gives the names of—as he himself says—the best authorities in France, all of whom believe the journal to be true; also a letter which leads him to say that the book was credited in the middle of the eighteenth century. After having quoted these authorities in favour of the truthfulness of the journal, Captain Oliver proceeds to give his own ideas on the subject, which are that the book was written by Defoe from Drury's story, and a great deal of the matter taken out of French books—namely, François Cauche, 1658, and Hacourt, 1661. He then goes on to say that the original journal had a French map, and he regards that also as evidence against Drury. Drury acknowledges himself to have almost forgotten the language and manners of his own country, and, as he was but fourteen years of age when he left, we may take it for granted that he did not know how to draw a map. What then could be more natural, when he had his journal edited, than to take the best map then published, which happened to be a French one, and give it with his journal?

After reading the introduction, one almost thinks that the book is fictitious; but when half-way through the journal, in which every little action is described so minutely, one comes to the conclusion that it is true—at least, that it has not been proved untrue. The journal itself is interesting, but very monotonous.

The description of the island by the Abbé Rochon is very interesting, as it tells all about the first attempts of the French to colonize Madagascar. H. C. L.

LETTERS TO THE EDITOR.

[*The Editor does not hold himself responsible for opinions expressed by his correspondents. Neither can he undertake to return, or to correspond with the writers of, rejected manuscripts intended for this or any other part of* NATURE. *No notice is taken of anonymous communications.*]

Large Meteors.

THE "ball of fire" seen by Mr. C. Randolph at Milverton, Somerset, on October 16, at 12h. 5m., and the "brilliant meteor" observed at Edinburgh, on October 17, at about 15h. (see NATURE of October 23, pp. 615 and 620), were probably members of the October meteor shower, which has a maximum on about October 18–20, and a radiant point at 92° + 16° in the extreme north-eastern limits of Orion.

There was also a fine meteor on October 19 at midnight. I was engaged in telescopic observation at the time, and was intently watching a new nebula I had just discovered about 2° N. of the star α Camelopardi, when I became aware of several brilliant flashes which lit up both sky and landscape in a startling manner. Quickly withdrawing my eye from the telescope, I turned towards the direction from whence the flashes proceeded, and saw the end point of a magnificent fire-ball which had fallen in the vapours on the western horizon. It left a bright streak just east of β Aquarii, or from 326° − 8° to 319° − 10°, but this soon died away.

This meteor must have been a grand object to observers in the Bristol Channel and in the western counties of England. The city clocks were striking the hour of twelve when it appeared, and from the direction of its flight it evidently belonged to the well-known Orionid meteor shower.

The new nebula I have referred to is situated at 71° + 68°, and is a fairly conspicuous object in my 10-inch reflector with a power of 60. I watched it for more than an hour for traces of motion, but detected none, so I assume it was not a comet. Since October 19 we have had clouded skies, and I have had no opportunity to re-observe the object.

Bristol, October 24. W. F. DENNING.

Extraordinary Flight of Leaves.

THE pastoral farm of Dalgonar is situated near the source of the Skarr Water, in the parish of Penpont, Dumfriesshire. The ridge of hills on the farm as per Ordnance Survey is 1580 feet above sea-level. There are only five trees on the farm—two ash and three larch. An extraordinary occurrence presented itself to the eyes of Mr. Wright, my informant, at the end of October 1889, on this farm, which has been narrated to me in a letter received from him, as follows:—

"I was struck by a strange appearance in the atmosphere, which I at first mistook for a flock of birds, but as I saw them falling to the earth my curiosity was quickened. Fixing my eyes on one of the larger of them, and running about 100 yards up the hill until directly underneath, I awaited its arrival, when I found it to be *an oak leaf*. Looking upwards the air was thick with them, and as they descended in an almost vertical direction, oscillating, and glittering in the sunshine, the spectacle was as beautiful as rare. The wind was from the north, blowing a very gentle breeze, and there were occasional showers of rain.

"On examination of the hills after the leaves had fallen, it was found that they covered a tract of about a mile wide and two miles long. The leaves were wholly those of the oak. No oak trees grow in clumps together nearer than eight miles. The aged shepherd, who has been on the farm since 1826, never witnessed a similar occurrence." JAMES SHAW.

Tynron School, Dumfriesshire, October 21.

On the Soaring of Birds.

IN answer to my criticism (NATURE, September 4, p. 457), Mr. Blix refers (October 16, p. 593) to an article in the *Skand. Arch. f. Physiologie*, in which he has given "an account of the weighty reasons" leading him "to suppose that soaring birds are able to undertake successive alterations of direction with very little loss of *vis viva*." To bring forward reasons, however, tending to show that birds *can* do certain things is no answer to an objection with regard to *how* they do them.

Mr. Blix has thought it superfluous to point out "that the manœuvre of the bird is the same, and the loss of energy thereby equally the same, whether the bird turns in a calm or in a uniform wind," from which it is to be inferred that he had thoroughly grasped the truth of this himself. Why did he, then, propound a theory founded upon what is directly contrary to his own conviction?

It is not easy to see what has led Mr. Blix to suppose that I hold any other opinion, since my letter was written with the intention of pointing out this fact to him.

19 Well Walk, Hampstead, October 23. C. O. BARTRUM.

MANNERS AND CUSTOMS OF THE TORRES STRAITS ISLANDERS.[1]

IT is not my intention this evening to attempt a special study of any particular institution or series of customs, nor even to discuss the ethnological affinities of the natives inhabiting the islands of Torres Straits.

[1] Friday Evening Lecture delivered at the Royal Institution, by Prof. Alfred C. Haddon, on May 23, 1890.