

precision found in exercise 5. Let  $M$  be a rational function of the  $n$  roots with coefficients in the domain  $\Omega$ . Let  $M$  be formally unaltered by the substitutions of a group  $Q$  and by no further substitutions on the  $n$  roots. If the conjugates of  $M$  under the symmetric group are all numerically distinct and if  $M$  is a number in  $\Omega$ , the Galois group for the domain  $\Omega$  is either  $Q$  or one of its subgroups.

The text furnishes interesting applications to cyclotomic equations; geometric constructions by ruler and compass, in particular to the possible divisions of the circle into equal parts; the duplication of the cube; the trisection of an angle.

L. E. DICKSON.

*Annuaire Astronomique pour 1905.* Hayez, Brussels, 1904. 16mo. 360 pp.

THIS handy little volume, published annually under the auspices of the Royal Belgian Observatory, would perhaps scarcely be a suitable subject for notice in these columns if the Society did not contain amongst its members many who in addition to their mathematical duties have charge of observatories in which research work is necessarily entirely subordinate to instruction. For such it will be found useful to have on the table, along with the Nautical Almanac, its contents including besides the usual astronomical data, formulæ for finding the various terms in use, full explanations of the tables, worked examples, etc. It is published primarily to aid in the administration of the Belgian public service, to give assistance and information to all interested in astronomy, and to popularize the study of the subject. From the way in which it is written and put together it would appear to be successful in achieving these objects.

ERNEST W. BROWN.

---

#### NOTES.

THE annual meeting of the AMERICAN MATHEMATICAL SOCIETY will be held on Thursday and Friday, December 29–30. The Council will meet on Thursday morning, and the annual election of officers and other members of the Council will close on Friday morning. At the opening of the afternoon session on Thursday, the retiring President, Professor THOMAS S. FISKE, will deliver the presidential address, the subject of which will be “Mathematical progress in America.”