#### PROB. V.

The Longitude of any Place given from any Meridian, to tell those Places baving the fame Longitude.

This is done after the fame manner as the other, only here the answer will be on the Equator. as the others were on the Meridian.

We would know what places have the fame longitude as London, and the fame longitude as Molcow.

The Rule is, bring London to the Meridian, then all those places on the globe (from the North Pole to the fouth part of the Horizon) that lie under the edge of the Meridian, have the fame longiude as London. Thus Fort Natlau, and Fort Mina, in Guinea, have the lame, or very nearly the fame longitude as London.

And Molcow, in Mulcovia, has very nearly the fame longitude as Aleppo, in Syria : alfo Scanderoon, Antioch, and Tripoli, in Syria, have the fame longitude, viz. between 37 and 38° east of London.

#### PROB. VI.

## To find the Difference of the Longitude of Places.

Definition. No place can exceed or be above 180° of longitude from another place; for 181° ealt longitude is with more propriety 179° weft longitude, for 181° taken from 360° there remains 179°, which is nearer to the given place than 181°.

Rule. Here are two variations. First, If the places lie both eaft or both welt of the first Meridian, or where you reckon the longitude from, viz. if they both be eaft or both welt longitude, then fubtract one from the other, you have the difference.

Thus Jerulalem is found 310 15' east longitude from London, and Pekin 117º east longitude ; therefore fubtract 36° 15' from 117', and there remains 80° 15' difference of longitude eaft or weft ; that is, Pekin is 80° 15' eait longitude of Jerufalem ; or Jerufalem is 80° 15' welt longitude of Pekin.

Secondly, If one place be east and the other west longitude of the first Meridian, (Suppose London, or any other Meridian) then add their longitudes together, and the fum is the difference of longitude required.

Example. To know the difference of the longitude between Jerusalem 36° 15' east of London. and Port Royal in Jamaica 77° 5' weft. Here as one is ealt and the other weft, add 36° 15' and 77° 5' together, and their fum makes

113º 20' difference of longitude : that is, Jerufalem is 113º 20' eaft of Port Royal, or Port Royal is 113º 20' west of Jerutalem.

Example. Pekin in China is 117° cast longitude, and Port Royal is 77° 5' welt; add these fums together, and 194° 5' will be found the difference of longitude; but because it is more than 180°, fubtract 194° 5' from 300°, and there remains 105° 55' the difference required.

Moft of the following problems are common to both globes.

#### PROB. VII.

# The Day of the Month given, to find the Sun's Place in the Ecliptic.

Rule. The day of the month being given, look on the inner calendar on the new globes, and you have the fign and the degree of that fign that the fun is in for that day, according to the New Stile. If it be upon old globes, look on the outward calendar, you have the fign and the degree of the fign.

N. B. It may be further observed, that the calendar used through Europe is the calendar for N. S. viz. New Stile, and is always known from the other, becaufe it has the faints days, and feveral other things wrote upon it on the Horizon.

Example. To know the fun's place in the Ecliptic on May the 21ft, N. S. March the 21ft, June the 21ft, September the 22d, and December the 21ft.

Look for these days of the months in order as they ftind in the new calendar; (viz. for N. S. before defcribed) and right against the day of the month, in the innermost circle on the Horizon, is found the fun's place among the figns as follows :

Thus right against May the 21st is found 1° of I Gemini : and also on March the 21st is found he enters of Aries: on June 21st he enters of Cancer: on September the 22d he enters a Libra: and on December the 21ft he enters by Capricorn.

Note, That in every problem and operation hereafter, except Old Stile be mentioned, it is to be underftood for New Stile, viz. N. S. and latitude always means north latitude, except expressed fouth.

#### PROB. VIII.

### The Sun's Place given, to find the Day of the Month.

This is only the reverse of the former problem; for having the fun's place given, feck it in the innermost circle among the figns; then against that degree in the calendar N. S. you have the Day of the month required.

Example.

1:xa and 25 ailt,

> The I Ral

Link U thin b ant he nonn) Equat Nut quadra

> Rul Merid or un t touth ( May t

The I Rul place of the Merid Ihu

5th he

Exa know Rul the inc (viz. tł index 1 betwee the fur the qu five in touche N.iabout

The La

Rule

and ine the inn riling: thus, h will it I eight a Note ofrifing Note remain Proc ing, ar and it g