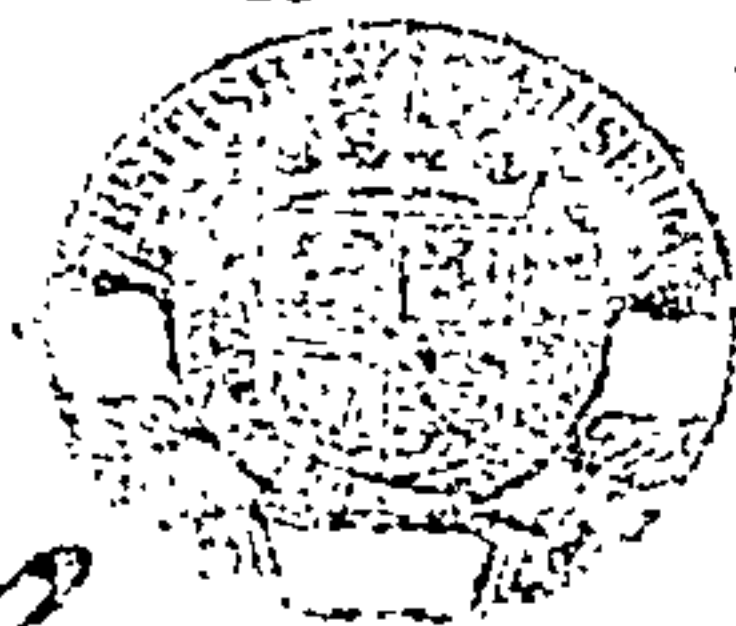


12
Sarah Collingwood

Her Book

February 6: 1795



Sarah Collingwood
Her Book

Sarah Collingwood Book

Sarah Collingwood



*Happy the YOUTH, who are betimes set right,
 And taught the Rules of VIRTUE with delight!
 By soft Endearments Generous Minds are won,
 By rigid Doctrines very Few or None: ———
 The CYNIC TUTOR fruitless Lectures reads,
 HE who gilds o're his Precepts best SUCCEEDS.*

THE Young Man's Companion :

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The several BRANCHES of Useful LEARNING
made perfectly easy.

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and Write true English ; the best and easiest Instructions for Writing
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Notes, Receipts, Bills, Bonds, Indentures, Leases, and Releases,
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MERCHANTS ACCOMPTS, &c.

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NEW STYLE ;

Shewing the Method of finding the GOLDEN NUMBER, EPOCH,
DOMINICAL LETTER, the Age of the MOON, EASTER-DAY, &c.
with an Account of the several ÆRAS, or EPOCHAS, used by Historians.

The ART of MENSURATION,

Applied to the Measuring of Boards and Timber, Carpenters, Joiners,
Sawyers, Bricklayers, Plasterers, Plumbers, Masons, Glaziers, and
Painters Work. How to compute the Charge of Building an House,
or any Part thereof. Gauging, Surveying, Plotting of Land by Gun-
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[Price Two Shillings and Six Pence.]

Cr. by those Goods, for the Sum they amount to. -- This I mention, because that most Authors, (if not all) whom I have met with on the Subject of Book-keeping, spend a great many Words which I think might be saved, in declaring the Cr. as well as shewing the Dtr. when it may be understood as aforesaid.

3dly, This Art of *Italian* Book-keeping is called *Book-keeping by double Entry*, because there must be two Entries; the first being a Charging of a Person, Money, or Goods: and the second a Discharging of a Person, Money, or Goods.

4thly, *Strictly note*, That if the first Entry be on the Dtr. or Left-hand Side of your Leidger, the next, or second Entry, must always be made on the Right-hand or Credit Side of your Leidger: For whenever one Person or Thing is charged, then always another Person or Thing is discharged for the same Sum, let it be what it will.

And so it is in balancing or evening an Accompt, and carrying it to another Folio: For if the old Accompt be evened by Balance on the Credit Side, then the new Accompt must be debited or charged on the *Debit* Side, for the Sum that balanced the old Accompt.

Much more might be said of this *Art of Book-keeping*, if I had Room; but I have plainly spoke of the principal Fundamentals thereof, which, I hope, may be sufficient for the Instruction and Improvement of any intelligent Reader.



OF CHRONOLOGY, or the Doctrine of TIME.

Containing an Account of the different *Æras* or *Epochas* used at different Times, and by different Nations; a full Explanation of the Old and New Styles; and the Method of finding the Golden Number, *Epact*, Moon's Age, Dominical Letter, Time of Easter, &c.

CHRONOLOGY is one of the most useful Branches of Learning in the whole Circle of the Sciences; by this we are enabled to distinguish the Times in which remarkable Events have happened, and, by that Means, reduce History to a Natural Series, and give it a proper Form.

An *Æra*, or *Epocha*, is the Time when some memorable Transaction occurred, and from whence some Nation or People date and measure their Computations of Time.

The most ancient *Epocha* is that of the Creation of the World, which happened 4004 Years before the Birth of *Christ*. This *Epocha* was used by most of the ancient *Jewish* Writers, who have left us a noble and authentic History of Occurrences from the Beginning of Things.

The second *Epocha* is that of the Deluge or Flood of *Noah*, which happened in the Year of the World 1656, or 2340 Years before our Saviour's Incarnation. This was also used by the *Jews* of old, but not so frequently as that of the Creation.

The third *Epocha* is that of the *Olympic Games*, which were instituted by *Hercules* in the Year of the World 3223, or 776 Years before the Birth of *Christ*. These Games were celebrated every four Years near the Temple of *Jupiter Olympus*, in *Elis*, a Province of *Peloponnesus*. This *Epocha* was used by the *Greek* Historians; but, instead of saying an Event happened in such a Year from this Establishment, they said, it happened in such a Year of the first, second, third, &c. *Olympiad*.

The fourth *Epocha* is that of the Building of *Rome*, which happened in the Year of the World 3251, or 753 Years before the Birth of *Christ*. This *Epocha* was used by the ancient *Romans*, before the Establishment of Christianity in that City.

The fifth *Epocha* is that of *Nabonassar*, which began in the Year of the World 3257, or 747 Years before the Birth of *Christ*. This *Epocha* is famous among Astronomers, as having been used by the *Chaldeans* and *Ægyptians*; but is hardly mentioned by Historians.

The sixth is that of the Death of *Alexander* the Great, which happened in the Year of the World 3676, or 324 Years before the Incarnation of our Saviour. This *Epocha* also is used principally by Astronomers.

The seventh *Epocha* is that of the Birth of *Christ*, which happened in the Year of the World 4004. This *Epocha* is used by all *Christians* in general; and most Historians reduce the other Epochas to this, in order to prevent Embarrassment and Confusion.

The eighth *Epocha* is that of the *Hejira*, or Flight of *Mohammed*, which happened in the Year of the World
4626,

626, and in the 622d of the *Christian* Æra. This Epocha is used by the *Turks*, *Arabs*, and others professing the *Mahomedan* Religion.

There are several other Epochas mentioned by Chronologists, but the above are the principal, and abundantly sufficient for our present Purpose.

But these Epochas could have been of no Use, unless a certain Measure of Time was agreed on, as it would otherwise be impossible to assign the Distance between these and other Events. This Measure Nature herself pointed out by the Return of the Seasons, and this Interval or Measure was called a Year.

Having thus ascertained the principal Interval, it was necessary to subdivide it into a certain Number of Parts; and these were also pointed out by Nature by the Returns of the new Moon. The Ancients observed, that, during the Interval between the Return of the Seasons, twelve new Moons happened, and therefore they divided the Year into Twelve Parts, which they called Months, from their being measured by the Moon. As they reckoned about thirty Returns of Mornings and Evenings between the new Moons, they made their Months to consist of thirty Days; and, consequently, their Year of twelve Months consisted only of 360 Days; and this is what is generally understood by the antient lunar Year.

But they soon perceived that this Year was far from agreeing with the Course of the Sun, the Seasons falling every Year later and later; and, consequently, in Time, the Beginning of the Year would gradually pass through all the Seasons. This obliged them to consider of some general Method to prevent the Year from beginning at different Seasons, but this was a Task they could not perform, and therefore had Recourse to temporary Methods, namely, by taking, from Time to Time, a Day or two from every Month, whenever they found it too long for the Course of the Moon, and by adding a Month as often as they found twelve lunar Months too short for the Return of the four Seasons. This Task was performed, from Time to Time by the Priests, whose Business it was to correct the Year, and render it conformable to the Motion of the Sun. This Kind of Year was formerly used by most Nations in the World, as is still continued by the *Turks* and *Arabs*.

This

This Method was, however, attended with great Difficulty, and, at the same Time, rendered the Method of fixing the Dates of memorable Events abstruse and uncertain. *Julius Cæsar*, therefore, about 40 Years before the Birth of *Christ*, undertook to rectify the Confusion that must attend a Variety of Accounts, knowing that his Order, as coming from the Emperor of the *Romans*, would be immediately obeyed in a very considerable Part of the World, and, in Time, spread into other Nations.

In order to this he decreed, that every Year, except the fourth, should consist of 365 Days, and the fourth of 366. This Decree was founded on the Authority of *Sysgenes*, an eminent Mathematician of *Alexandria*, in *Egypt*, who had found, by Experience, that the Year consisted of 365 Days and a Quarter; the true Reason, therefore, why every fourth Year was to consist of 366 Days, was to compensate for the Quarter of a Day omitted in each of the three preceding Years. And this Method of computing Time is that called the *Julian Account* or *Old Style*, which continued in most *Christian* States till the Year 1582.

But, as Astronomy advanced towards Perfection, Observations were made with greater Accuracy, and these demonstrated that *Sysgenes* was mistaken with Regard to the Length of the solar Year, which consists only of 365 Days, 5 Hours, 48 Minutes, 55 Seconds, &c. being 11 Minutes 5 Seconds less than 365 Days, 6 Hours; therefore the *Julian* Year will gain one Day in 130 Years, that is, if the vernal Equinox, or the Time when the Sun rises and sets exactly at six o'Clock, happened in any Year on the 21st of *March*, it would, after an Interval of 130 Years, happen on the 20th, and thus continue to move in a retrograde Order. Consequently, if one Day be omitted in 130 Years, the current Account of Time will nearly agree with the Motion of the Sun. For as 24 Hours is the least Quantity that can be taken from an Account of Time where the least Denomination is a natural Day, so this Quantity is actually subtracted as soon as the Difference between the Computation and the Motion of the Sun amounts to that Quantity.

We know from History, that at the Time when the Council of *Nice* was held, namely, in 325, the vernal Equinox happened on the 21st of *March*, and at this Council

Council the Time for celebrating *Easter* was settled. But, about the Year 580, the vernal Equinox was observed to fall on the 11th of *March*, ten Days later than it did at the Time of the *Nicene* Council; this Pope *Gregory*, then Pope of *Rome*, observed, and, in order to celebrate the Feast of *Easter*, according to the original Intention of the Council of *Nice*, he ordered, by a Bull, published in 1581, that the ten Days should be that Year taken out of the Calendar, by calling the 5th of *October* the 15th, by which Means, the vernal Equinox was again made to fall on the 21st of *March*, and the Feast of *Easter* celebrated at its proper Time.

But he knew that this Correction was not sufficient to prevent the Equinox from continuing its retrograde Motion, which had, since the Council of *Nice*, produced so sensible an Alteration; he therefore ordered, that all the succeeding Hundred-years divisible by 4, as the Years 1600, 2000, 2400, 2800, &c. should contain 366 Days; and the Centuries or Hundred-years not divisible by 4, as 1700, 1800, 1900, 2100, 2200, &c. should contain only 365 Days; the intermediate Years being reckoned as they were before in the *Julian* Account, or old Style. This Alteration was called the *Gregorian* or New Style, and followed by most of the *Christian* States. The *English* however continued to make use of the Old Style till the Year 1752, when the Calendar was corrected, and a Style nearly the same with the *Gregorian* introduced. But as the Equinox then happened one Day later than it did when Pope *Gregory* reformed the Style, eleven Days were ordered to be taken out of the Calendar, by calling the 3d of *September* the 14th; by which Correction, our Account of Time was rendered conformable to that of other *Christian* Powers, and the Feast of *Easter* celebrated according to the original Intention of the Council of *Nice*.

The Calendar now in Use with us and other *Christian* States consists of 12 Months, called, *January*, *February*, *March*, *April*, *May*, *June*, *July*, *August*, *September*, *October*, *November*, *December*, each consisting of a certain Number of Days, which may be easily remembered by the following Distich:

Thirty Days hath *September*, *April*, *June*, and *November*;
February hath twenty eight alone; all the rest have thirty-one.

But

But every fourth Year, which consists of 366 Days, *February* hath 29 Days. This additional Day was intercalated in the old *Roman* Calendar immediately after the 24th of *February*, then called *The Sixth of the Calends of March*, and, being that Year reckoned twice over, the Year was called *Bisextile*, or *Leap-year*.

There is no Difficulty in finding whether any Year be a common or Leap-year; all that is requisite being to divide the Year by 4: if nothing remains it is Leap-year, but if 1, 2, or 3 remain, it is the first, second, or third Year after.

Example 1. *Is the Year 1761 a Leap-year or not?*

$$\begin{array}{r} 4) 1761 \quad (440 \\ 16 \end{array}$$

$$16$$

$$16$$

$$1$$

The 1 remaining shews, that the Year 1761 is the first Year after Leap-year.

Example 2. *Is the Year 1764 a Leap-year or not?*

$$\begin{array}{r} 4) 1764 \quad (441 \\ 16 \end{array}$$

$$16$$

$$16$$

$$4$$

$$4$$

From the Work it appears that the Remainder is Nothing, and therefore that the Year 1764 is Leap-year.

But the Division of the Years into Months, and the Months into Days, was not sufficient for the Purpose of keeping an accurate Account of Time; the Day is therefore divided into 24 equal Parts, called Hours; the Hours into 60 equal Parts, called Minutes; the Minutes into 60 equal Parts called Seconds, &c. The Year is also divided into Weeks, each Week containing 7 Days, and consequently a common Year contains 52 Weeks and one Day. So that if the Year began on a *Monday*, it will also end on a *Monday*, and the next will begin on a *Tuesday*, &c.

It

It has long been a Custom to mark the seven Days of the Week with the seven first Letters of the Alphabet, always placing A against the first of *January*, B against the second, C against the third, D against the fourth, E against the fifth, F against the sixth, and G against the seventh and so on through the Year; by which Means whatever Letter stands against any particular Day of the Week in the first Series, and the same Year, will point out the same Day throughout the Year. Thus, if the first of *January* happens on a *Thursday*, against which the Letter A is placed, the same Letter will point out all the *Thursdays* in the Year: And that Letter answering to the *Sundays* is called the Dominical Letter, and may easily be found by the following

Rule. To the given Year add it's 4th Part, divide the Sum by 7, subtract the Remainder from 7, and the last Remainder will be the Index of the Letter in a common Year; but in Leap-year the Letter so found will only serve till the 24th of *February*, and the next, in a retrograde Order, will be the Dominical Letter for the Remainder of the Year.

Example 1. *What is the Dominical Letter for the Year 1761?*

It's 4th Part	1761
	440
	<hr style="width: 50px; margin: 0;"/>
	7)2201(314
	21
	<hr style="width: 50px; margin: 0;"/>
	10
	7
	<hr style="width: 50px; margin: 0;"/>
	31
	28
	<hr style="width: 50px; margin: 0;"/>
	3
Then from 7	3
Take	<hr style="width: 50px; margin: 0;"/>
	4

And the Remainder shews that the 4th Letter in the Series, viz. D, is the Dominical Letter for the Year 1761.

Example

Example 2. *What is the Dominical Letter for the Year 1764?*

$$\begin{array}{r}
 \text{It's 4th Part } 1764 \\
 \quad \quad \quad 441 \\
 \hline
 7)2205(315 \\
 \quad 21 \\
 \hline
 \quad \quad 10 \\
 \quad \quad 7 \\
 \hline
 \quad \quad 35 \\
 \quad \quad 35 \\
 \hline
 \end{array}$$

The Remainder 0 being subtracted from 7, leaves the same Number, and shews that the 7th Letter, *viz.* G, is the Dominical Letter, but, being Leap-year, there are two, *viz.* G and A, the latter serving till the 24th of *February*, and the former all the rest of the Year.

The Solar Cycle, or Cycle of the Sun, is a Period of 28 Years, in which all the Varieties of the Dominical Letters will have happened, and the same Order of Letters will return as as before. But it must be remembered, that this Series, which was always constant in the *Julian* or old Account of Time, is, in the *Gregorian*, or new, interrupted every hundredth Year, which will then be common Years, except the four-hundredth, which will be a Leap year, as in the old Account of Time. The first Interruption, therefore, will not happen till the Year 1800, which will be a common Year, and consist only of 365 Days.

If this Cycle had commenced with the *Christian* *Æra*, the Method of finding it would have been to divide the current Year by 28, and the Remainder would have been the Year required; but that was not the Case, the first Year of Christ happened in the tenth Year of the Cycle; we must therefore observe the following

Rule.] Add 9 to the given Year, and divide the Sum by 28; the Remainder will be the Year of the Cycle required.

Example.

Example. *What is the Cycle of the Sun for the Year 1761?*

$$\begin{array}{r}
 1761 \\
 \text{Add } 9 \\
 \hline
 28)1770(63 \\
 \underline{168} \\
 90 \\
 \underline{84} \\
 6
 \end{array}$$

6 Answer.

The Lunar Cycle, or Cycle of the Moon, is a Period of nineteen Years, containing all the Variations of the Days on which the new and full Moons happen, after which they fall on the same Days they did nineteen Years before. Consequently, by calculating the new and full Moons for nineteen Years, the new and full Moons either past, present or to come, are also known. This Cycle was invented by *Meton*, the *Athenian*, and thence frequently called the *Metonic Cycle*. But though the new and full Moons will happen on the same Day they did nineteen Years before, yet they will not happen at the same Time of the Day, but 1 Hour, 28 Minutes, 15 Seconds sooner, which, in 310 Years, will amount to one whole Day; and this created great Confusion in the old Method of computing Time, but was rectified by the late Reformation in the Calendar. The Years of this Cycle were annexed to the old Calendars in golden Characters, and thence called the *Golden Number*, and often the *Prime*. In order to find it observe this

Rule.] Add 1 to the Year of our Lord, and divide the Sum by 19; the Remainder will be the Prime, or Golden Number required.

Example. *What is the Golden Number for the Year 1761?*

$$\begin{array}{r}
 1761 \\
 \underline{1} \\
 19)1762(92 \\
 \underline{171} \\
 52 \\
 \underline{38} \\
 14
 \end{array}$$

14 The Golden Number required.

It

It has been found by accurate Observations, that the Solar Year exceeds the Lunar by 10 Days, 21 Hours, and 19 Seconds, or 11 Days nearly, which are therefore called *Epacts*, or *intercalary Days*; therefore the Epact of any Year is the Age of the Moon on the first Day of that Year; and as the Interval of Time between new Moon and new Moon is nearly thirty Days, we may easily find the Moon's Age any Day in the Year by the Help of the Epact. And as the Epact increases 11 Days every Year, and is 0 when the Golden Number is 1, the Epact may be readily found by the following

Rule.] Multiply the Golden Number by 11, and divide the Product by 30; subtract 11 from the Remainder, and the Residue is the Epact required; but if the Remainder be less than 11, add 19 to it, and the Sum will be the Epact.

Example 1. *What is the Epact for the Year 1761?*

The Golden Number for the Year 1761 is 14
Multiply by 11

$$\begin{array}{r} 30 \overline{) 154} 5 \\ 150 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ \text{Add } 19 \\ \hline \end{array}$$

The Epact 23

Example 2. *What is the Epact for the Year 1765?*

Golden Number for that Year 18
11

$$\begin{array}{r} 30 \overline{) 198} 6 \\ 180 \\ \hline \end{array}$$

$$\begin{array}{r} 18 \\ \text{Subtract } 11 \\ \hline \end{array}$$

The Epact 7

N. B. This Rule for finding the Epact will hold good till the Year 1000, and no longer.

The Epact being known, the Age of the Moon may be readily found by the following

Rule.]

Rule.] Add the Epact, Number of the Month, and the Day of the Month, together; and the Sum, if less than 30, is the Moon's Age; but, if greater, 30 must be taken from it as often as possible, and the Remainder will be the Moon's Age.

The Numbers of the Months are these:

0.	2.	1.	2.	3.	4.	5.	6.	8.	8.
Jan.	Feb.	March,	April,	May,	June,	July,	Aug.	Sept.	Oct.
10.	10.								
Nov.	Dec.								

Example. What is the Moon's Age on the 1st of March 1761?

The Epact is	23
No. for the Month	1
Day of the Month	1

The Moon's Age required 25

Note, The Moon's Age is reckoned from the Conjunction, or Change of the Moon.

Example 2. What is the Moon's Age on the 22^d of November, 1765?

The Epact is	7
No. of the Month	10
Day of the Month	22

	39
Subtract	30

The Moon's Age 9

The *Jews* were commanded by God himself (See *Exod.* ap. xii. 6.) to celebrate the Passover in the first Month, on the 14th Day of that Month at Even. But as the *Jewish* Months were Lunar, the 14th Day was always the Day of the Full Moon; and this Full Moon, at the Time of our Saviour's Crucifixion, happened on the 3^d of April, being the first Full Moon after the vernal Equinox. And, in Obedience to this Command, the primitive Fathers of the Church ordered, that *Easter* should be celebrated on the first Sunday after the first Full Moon that happened after the vernal Equinox, which at the Time of the Council

of Nice, when this Order was made, fell upon the 21st of *March*, nearly at the same Time it now happens according to the reformed or New Style. Consequently this Reformation in the Calendar has caused the Feast of *Easter* to be celebrated according to the original Design of the ancient Fathers. From this Order of the *Nicene Council* it follows, that *Easter-Day* can never happen before the 22d of *March*, nor after the 28th of *April*, but may fall on any of the intermediate Days, and may be easily found by the following

Rule.] Find the Epact for the Year proposed, and if it be less than 24, subtract it from 44; but if it exceeds 24, subtract it from 74; and if the Epact be just 24, take it from 73: Also, if the Epact be 25, and the Golden Number between 12 and 19, both Numbers inclusive must be taken from 73, the Remainder will be *Easter Limit*, or the Day of the Paschal full Moon. If this Limit be less than 32, the full Moon is in *March*; but if it exceeds 31, it is in *April*: The *Sunday* after this full Moon is *Easter-Day*.

Example 1. *I would have Easter-Day for the Year 1762.*

The Epact for 1762 is 4, subtract it therefore from 44, and the Remainder is 40; from which take 31, and the Remainder 9 is *Easter Limit*, that is, the Paschal full Moon preceding *Easter-Day*. But the 9th of *April* in the Year 1762 is *Friday*; consequently the *Sunday* following, namely, the 11th of *April*, is *Easter-Day*.

Example 2. *When will Easter be celebrated in the Year 1764?*

The Epact for the Year 1764 is 26; which taken from 74, leaves 48; from which subtract 31, and the Remainder 17 shews, that *Easter Limit* happens on the 17th of *April*; but the 17th of *April* that Year is *Tuesday*; consequently, the next *Sunday*, namely, the 22d of *April*, is *Easter-Day*.

When the Moon is in Conjunction with the Sun, that is, at the Time of her changing, she comes to the Meridian, or directly South of us, at the same Time with the Sun, that is at Noon; and, on the Contrary, at opposite Times when she is at full, she is South at Midnight. Therefore between the New and the Full she comes to the Meridian before Midnight, and when past the Full, after,

in the Morning. Also, at the Time of the Change she rises nearly at the same Time with the Sun, and at Full about the Time of Sun-setting. Hence we are taught a very easy Method of finding the Moon's Southing; for as there are, in round Numbers, 15 Days between the Change and Full; and as the Moon comes to the South 12 Hours later at the Full than at the Change; the Time of her Southing will be found by the following

Rule.] Multiply the Moon's Age by 12, and divide it by 15, or, which is the same Thing, multiply it by 4, and divide it by 5, and the Quotient will be the Hours, and the Remainder, if any, will be the additional Minutes.

Example 1. *What Time will the Moon come to the South on the 1st of March 1761?*

The Moon's Age, as found before, is 25

$$\begin{array}{r} 4 \\ \hline 5 \overline{) 100} \text{ (20} \\ \underline{10} \end{array}$$

That is, at Eight in the Morning, reckoning from Noon, as the Moon's Age was reckoned from the Change; but if we had subtracted 15 from it, the Days before she was at Full, and multiplied the Remainder 10 by 4, and divided it by 5, as above, it must have been reckoned from Midnight; and the Answer would have been the same, viz. Eight in the Morning.

Example 2. *What Time will the Moon come to the South on the 22d of November, 1765?*

The Moon's Age then is

$$\begin{array}{r} 9 \\ 4 \\ \hline 5 \overline{) 36} \text{ (7} \\ \underline{35} \\ 1 \\ 12 \\ \hline 12 \end{array}$$

Answer, at 12 Minutes after 7 in the Evening

Besides the Cycles already explained, there is another that has no Regard to the Celestial Motions, called the

Roman Indiction, consisting of 15 Years: And as 3 Years of this Cycle were elapsed at the Birth of *Christ*, it is easily found by the following

Rule.] Add three to the given Year, and divide the Sum by 15; the Remainder will be the Year of the Cycle, and the Quotient shew the Number of complete Periods that have elapsed since the Birth of *Christ*.

Example. What is the *Roman Indiction* for the Year 1761?

$$\begin{array}{r}
 \text{Add } 1761 \\
 \quad 3 \\
 \hline
 15 \overline{) 1764} \text{ (117} \\
 \quad 15 \\
 \hline
 \quad 26 \\
 \quad 15 \\
 \hline
 \quad 114 \\
 \quad 105 \\
 \hline
 \quad \quad 9
 \end{array}$$

Answer 9, and 117 complete Periods have elapsed since the Birth of *Christ*.



Of MEASURING.

THE Magnitudes, or Objects to be measured, are of two Kinds, Superficies and Solids. In measuring Superficies, the Surface only, *viz.* the Length and Breadth is regarded; but in Solids, the Depth, or Thickness, is also to be considered. We shall, therefore, explain each distinctly, and then shew how the Rules are reduced to Practice.

Of Measuring SUPERFICIES.

The Art of measuring Superficies consists in finding how many square Inches, Feet, Yards, &c. any flat Substance as a Board, a Piece of Glass, &c. contains, which is called its Area, or Content; and will be various according to the Form and Dimensions are different. But it must be carefully