divide the remaining decimal by the divisor the quotient would be of the same denomination as the divisor. But it might be asked, why not annex ciphers, instead of prefixing them. The reason is, the quotient must be such a number, which multiplied by the divisor will produce the dividend. Now if the ciphers be annexed the product will be as many ten times to great, as there are ciphers annexed, hence they must be prefixed

To

Mr. Wm B. Woods.
Newark
Ohio

I remain Truly your Brother
Charles Robert Woods

To Wm B. Woods

Worthington March 9th 48.

Dear Brother

I hope you will excuse me for neglecting to write to you sooner, I should have written before, but I have been looking for a letter from you for some time and thought that I would not write until I received your letter. Mr Nash has not had any school yesterday or to day in consequence of the examination at the Female Seminary, which most of the scholars wished to attend. The examination was very interesting, and well attended; however it has not been as interesting, as they have formerly been.

There has been several parties in town within the last two weeks, but I have not attended any of them, because I thought I could not spare the time.

I have been affraid from your not writing that there has been some difficulty with regard to my getting the appointment. Have you heared from Duncan since you were over here? If so what is the prospect?

I have been thinking for a few days past that if I get the appointment I had better come home for I think I could get along with my spelling and writing better there than I do here for Mr. Nashes time is so much taken up that he cannot render me much assistance. Nor can I get to read as much aloud as I would wish on Rankins account, for it disturbs him.

I suppose Eliza is still at home? Give my love to Aunt O Banon and all our family.

To divide a whole number by a fraction.

We multiply the whole number by the denominator of the fraction, and divide the product by the numerator

The reason why we multiply the whole number, by the denominator; is, to reduce it, so that any of the parts, will be equal to any of the parts of the divisor; hence, having the whole number reduced to parts equal in magnitude, to those of the dividing fraction; we may easily come at the true quotient, by dividing the whole number so reduced; by the numerator of the fraction: or, after multiplying the whole number by the denominator of the fraction; it may, together with the numerator of the fraction, be considered as whole numbers, as, the units are of the same magnitude in each

To divide one fraction by another.

Invert the divisor, and multiply the two upper terms together for a new numerator; and the two lower terms for a new denominator

The reason for inverting the divisor, and multiplying the upper terms together; is, because it is multiplying the dividend by the denominator of the dividing fractions; and to multiply the lower terms together is dividing, by the numerator of the fractions.

To find the common denominator of several fractions.

Multiply all the denominators together for a common denominator, and each of the numerators, by all the denominators except its own. By this process it is plain, that the value of the several fractions are not changed; for both terms of each fraction is multiplied by the same numbers; hence they retain their original value

To annex a cipher to a decimal fraction, does not alter its value: for the reason that the denominator when expressed, consists of one with as many ciphers as there are

places in the numerator; hence to annex a cipher to the numerator, is equivalent to multiplying both terms of the fraction by ten.

By prefixing a cipher to a decimal we diminish the value of the fraction ten times. Because the numerator remains the same; while the denominator would be increased ten times

The reason why we prefix ciphers to the product of a decimal numbers after multiplying when the number of places is not equal to those in both the factors. Suppose we have two decimal numbers which are required to be multiplied together; the product will be of the least denomination mentioned in the factors; that is if we have tenths and hundredths to be multiplied together the product it is understood that the denominators are one with as many ciphers to the right as there are places in the numerator. Then by multiplying the two numerators together, for a new numerator, and the denominators; for a denominator we should have the product in the form of a vu fraction; but we wish to have it expressed decimally; hence by prefixing ciphers until the places in the numerator equal the number of ciphers in the denominator; we are at liberty to remove the denominator, and the value of the fraction, will be expressed by putting the decimal point to the left of the number.

The reason why we prefix ciphers to the quotient after division, when the places in the quotient does not equal the excess of those in the dividend, over those in the divisor In dividing one decimal by another we are at liberty to remove the decimal point in either direction providing we make a corresponding removeal of the decimal point in the dividend; for instance, if we remove the decimal point from the left of the divisor to the right, we should have to remove the point in the dividend as many places to the right as there was places in the divisor. Then to

divide the remaining decimal by the divisor the quotient would be of the same denomination as the divisor. But it might be asked, why not annex ciphers, instead of prefixing them. The reason is, the quotient must be such a number, which multiplied by the divisor will produce the dividend. Now if the ciphers be annexed the product will be as many ten times to great, as there are ciphers annexed, hence they must be prefixed

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To Wm B Woods