Van Miller
MATH 1350
Math for Elem. School Teachers
Dr. Alm

11-6-18

HW: Ch. 17: 5, 10, 11
Ch. 18: 1, 5, 11, 15

Ch. 18 | Division of Fractions

Def'n: If A & B are fractions, and $B \neq 0$, then $\frac{A}{B}$ is the fraction C so that $A = C \times B$

Side Note: $12 \div 3$ was the # N such that $3 \times N = 12$.

This required that the # N must be a whole # and that the divisor was less the dividend.

Ex. $\frac{12}{18} = F \times \frac{4}{3}$

★ the numerator of F will be multiplied by 4 and it must equal 12.

$$\frac{12}{18} = \frac{3}{6} \times \frac{4}{3}$$

★ The denominator of F will be multiplied by 3 & must be 18.

Rewrite as a statement of division:

$$\frac{\frac{12}{18}}{\frac{4}{3}} = \frac{3}{6}$$

(vinculum)

★ Be sure to write without ambiguity. The students should not have to guess the meaning of notation.

Ex. $\frac{\frac{1}{2}}{\frac{3}{4}}$ could have many meanings...

Ex. $\frac{13}{17} = G \times \frac{4}{3}$

This one is more difficult since there isn't a whole # that will give us: $4 \times \_ = 13$ & $3 \times \_ = 17$..

$$\frac{13}{17} = \frac{13 \times 3}{17 \times 4} \times \frac{4}{3}$$

→ allows us to cancel the 3's

→ allows us to cancel the 4's

★ Notice that we used the reciprocal.

So, $\frac{\frac{13}{17}}{\frac{4}{3}} = \frac{13 \cdot 3}{17 \cdot 4}$

When we add fractions, we find a common denominator & then add the numerators.