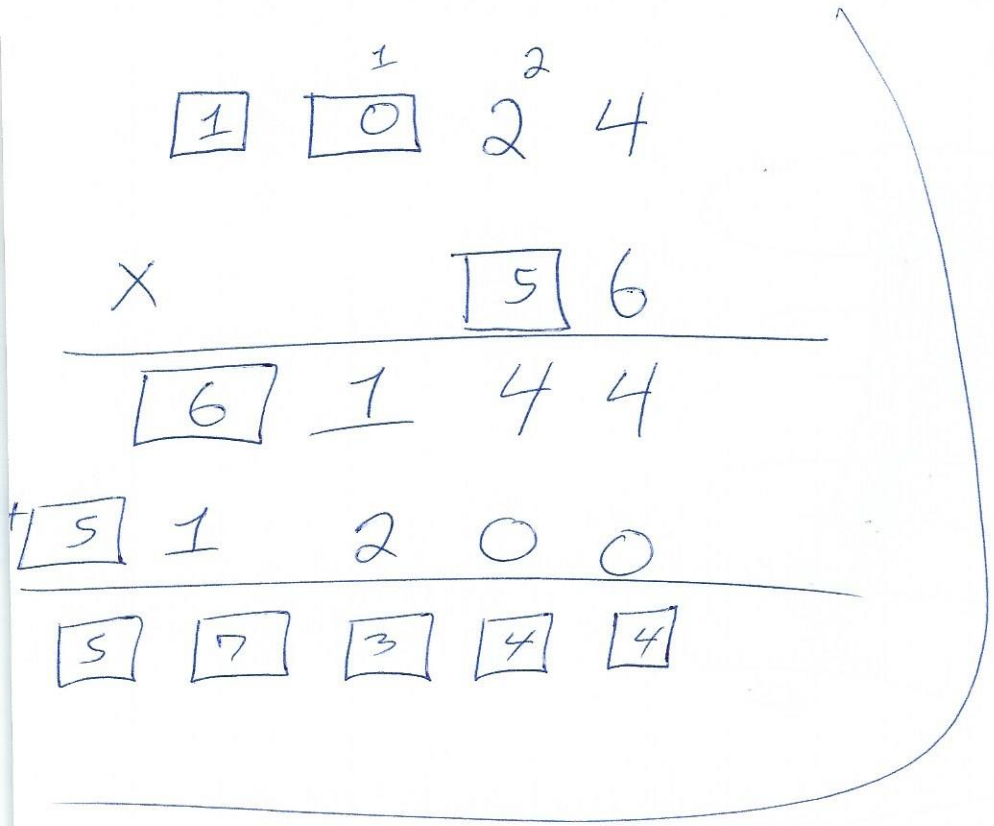
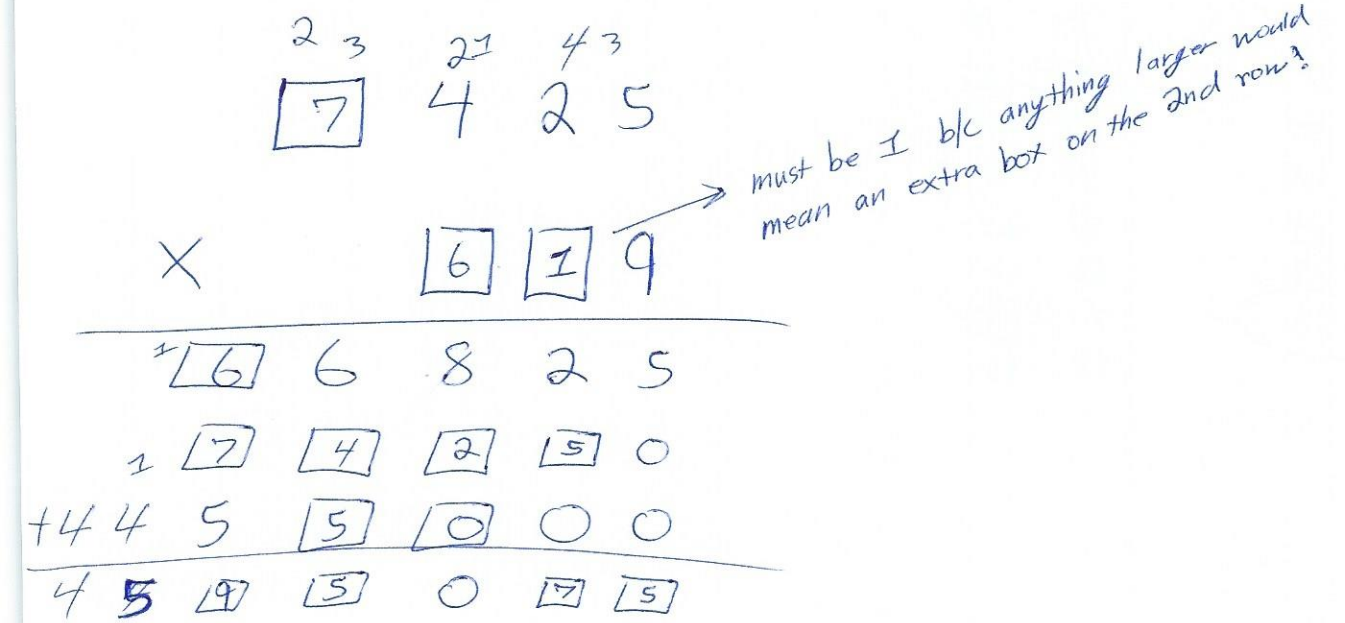
Van Miller
MATH 1350
Math for Elem. School Teachers
Dr. Alm

10-2-18

No HW, just study for the exam and read Ch. 12 on fractions.





Worksheet for Ch 7

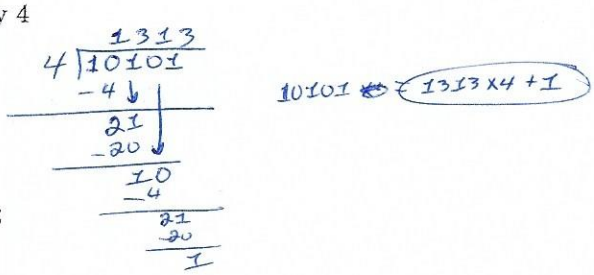
Let's count with the symbols 0, 1, 2, 3, 4, 5. Here is a grid to help:

00	01	02	03	04	05
10	11	12	13	14	15
20	21	22	23	24	25
30	31	32	33	34	35
40	41	42	43	44	45
50	51	52	53	54	55

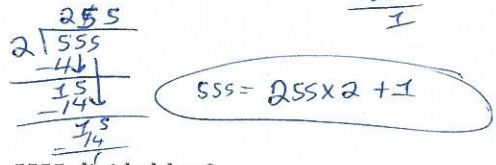
Compute the following divisions-with-remainder, using the standard algorithm. Write your answer in the form $a = q \times d + r$, with $0 \leq r < d$.

1. 123 divided by 5 (Here, you'll write $123 = q \times 5 + r$.)

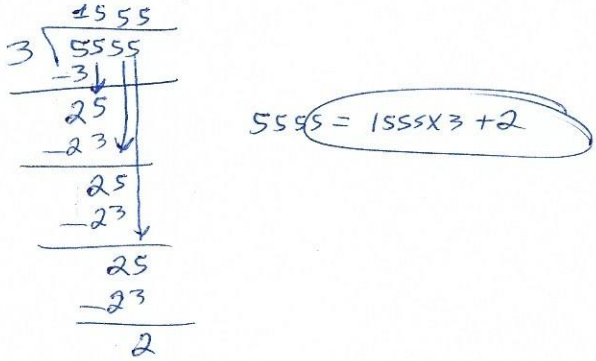
2. 10101 divided by 4



3. 555 divided by 2



4. 5555 divided by 3



Fill in the missing digits (using Hindu-Arabic, i.e. base 10)

$$
\begin{array}{r}
\square\square\square\square \\
7\,\overline{)\,\square\square\square\square\square} \\
-\;5\;6 \\
\hline
\quad 5\;0 \\
-\;4\;9 \\
\hline
\quad\quad 1\;5 \\
-\;1\;4 \\
\hline
\quad\quad\quad 1\;9 \\
-\;1\;4 \\
\hline
\quad\quad\quad\quad 5
\end{array}
$$

$$
\begin{array}{r}
1\,7\,4 \\
3\,\overline{)\,5\,2\,4} \\
-\;3 \\
\hline
\quad 2\,2 \\
-\;2\,1 \\
\hline
\quad 1\,4 \\
-\;1\,2 \\
\hline
\quad\quad 2
\end{array}
$$

$$
\begin{array}{r}
\square\square\square\square \\
5\,\overline{)\,\square\square\square\square\square} \\
-\;5 \\
\hline
\quad 1\;0 \\
-\;1\;0 \\
\hline
\quad\quad 0\;8 \\
-\;\quad 5 \\
\hline
\quad\quad\quad 3\;9 \\
-\;3\;5 \\
\hline
\quad\quad\quad\quad 4\;9 \\
-\;4\;5 \\
\hline
\quad\quad\quad\quad\quad 4
\end{array}
$$

Exam 2 Content

- Def'n of multiplication
- multiplication and division algorithms } including other bases!
- explanation of division using #100, #10, + #1
- Find missing digits

definitely base 6.

$3 \times 7 = 7+7+7 = 21$

$3 \times 0 = 0+0+0 = 0$

$0 \times 3 = 0$

Worksheet #1

$$\begin{array}{r} 014 \\ 5\overline{)123} \\ -05\downarrow \\ \hline 33 \\ -32 \\ \hline 1 \end{array}$$

$123 = 14 \times 5 + 1$

Base 6

00 01 02 03 04 05

10 11 12 13 14 15

20 21 22 23 24 25

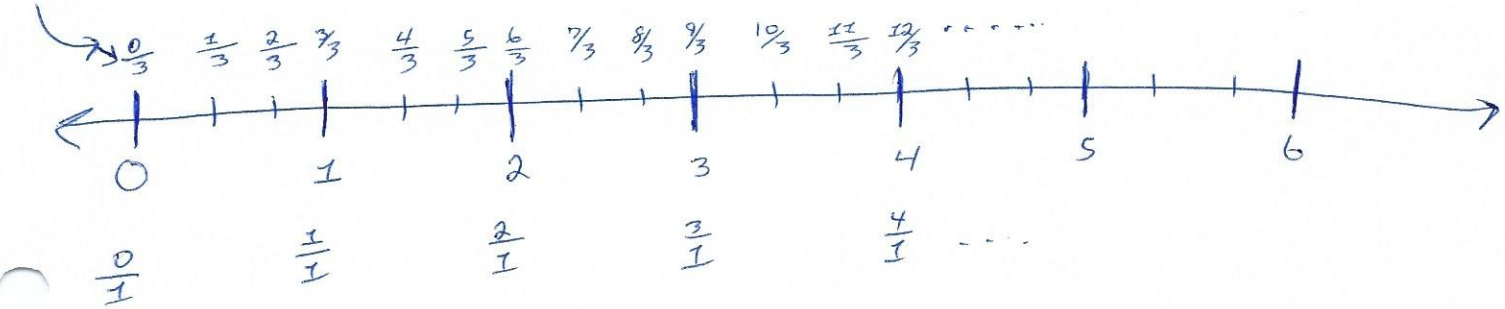
Fractions

Fractions are essential for algebra. So, ensuring your students understand fractions is of paramount importance!

1/2 ← solidus

vinculum

Sequence of 3rd's



There is no mathematical reason to simplify fractions.

$\frac{6}{8}$ is a good answer. It is just as valid as $\frac{3}{4}$.

$\frac{63}{51}$ Is this simplified?

No, $\frac{63}{51} = \frac{3 \times 3 \times 7}{17 \times 3} = \frac{21}{17}$ This is hard.

$$\frac{1}{\sqrt{2}} + \frac{\sqrt{5}}{7} = \frac{7}{\sqrt{2} \times 7} + \frac{\sqrt{10}}{\sqrt{2} \times 7}$$

$$\frac{1}{2} + \frac{3}{5} \neq \frac{1+3}{2+5}$$

This symbolizes a confusion that these 2 #'s are on a different sequence.

A sequence that contains both 1/2 & 3/5 would be the sequence of 10ths.
