

Division assignment:

1. Do the problem  $838 \div 36$  three ways:

- Draw out how to solve it using manipulatives (your choice of base 10 blocks or stamp game)
- Write out the answer using the scaffolding algorithm
- Write out the answer using standard (long) division
- Then color code a, b, and c or in some other way explain and draw how the 3 solutions fit together.

2. Do each of these problems by scaffolding division using friendly numbers (not the most efficient numbers) **and** by standard (long) division. Color code the solutions to show how the two solutions methods fit together.

- $2036 \div 26$
- $969 \div 14$

3. Below is the work of 3 fictional students. Some of them (at least 1) are making consistent errors. That means, if there is the opportunity in the problem for them to make their error, they will make it. Some of them (at least 1) have alternate algorithms that they are using (that yield the correct result in a reasonable). Try to figure out what each is doing and why.

- Figure out what each student is doing and to do the same thing they would on the uncompleted problems at the end of each set.
- Explain what they did in words: *what are they doing* and why: *is it an error or an alternate algorithm?*

A.

50R4	560R6	730	370		
5)254	9)4560	8)5840	7)2149	6)4818	7)3525
256	45	5600	21		
4	60	240	49		
	54	240	4		
	6				

B.

140R3	34R2	524R10	281R22	
6)843	8)2738	14)7346	26)7328	24)5132
600	1600	5600	5200	
243	1138	1746	2128	
210	338	1400	2080	
3	320	346	48	
	18	280	26	
	2	66	1	
		56	22	
		10		

C.

$$\begin{array}{r} 134R3 \\ 8 \overline{)1075} \\ \underline{8} \\ 27 \\ \underline{24} \\ 35 \\ \underline{32} \\ 3 \end{array}$$

$$\begin{array}{r} 27R4 \\ 6 \overline{)1246} \\ \underline{12} \\ 46 \\ \underline{42} \\ 4 \end{array}$$

$$\begin{array}{r} 32 \\ 14 \overline{)4228} \\ \underline{42} \\ 28 \\ \underline{28} \\ 0 \end{array}$$

$$\begin{array}{r} 49 \\ 11 \overline{)4502} \\ \underline{44} \\ 102 \\ \underline{99} \\ 3 \end{array}$$

$$\begin{array}{r} 7 \overline{)2861} \\ \underline{21} \\ 76 \\ \underline{70} \\ 61 \end{array}$$

$$\begin{array}{r} 12 \overline{)3708} \\ \underline{24} \\ 130 \\ \underline{120} \\ 108 \\ \underline{108} \\ 0 \end{array}$$

D.

$$\begin{array}{r} 47 \\ \times 36 \\ \hline 1200 \\ 240 \\ 210 \\ 42 \\ \hline 1,692 \end{array}$$

$$\begin{array}{r} 38 \\ \times 25 \\ \hline 1600 \\ 150 \\ 160 \\ 40 \\ \hline 950 \end{array}$$

$$\begin{array}{r} 74 \\ \times 23 \\ \hline 1400 \\ 210 \\ 80 \\ 12 \\ \hline 1,702 \end{array}$$

$$\begin{array}{r} 432 \\ \times 27 \\ \hline 8000 \\ 2866 \\ 608 \\ 210 \\ 46 \\ 14 \\ \hline 11,664 \end{array}$$

$$\begin{array}{r} 54 \\ \times 29 \\ \hline \end{array}$$

$$\begin{array}{r} 234 \\ \times 68 \\ \hline \end{array}$$

E.

$$\begin{array}{r} 264 \\ \times 27 \\ \hline 1448 \\ 1480 \\ \hline 1,928 \end{array}$$

$$\begin{array}{r} 347 \\ \times 36 \\ \hline 282 \\ 1410 \\ \hline 1,892 \end{array}$$

$$\begin{array}{r} 283 \\ \times 37 \\ \hline 1581 \\ 2690 \\ \hline 3,276 \end{array}$$

$$\begin{array}{r} 3642 \\ \times 29 \\ \hline 15778 \\ 15940 \\ \hline 21,718 \end{array}$$

$$\begin{array}{r} 42 \\ \times 36 \\ \hline \end{array}$$

$$\begin{array}{r} 63 \\ \times 29 \\ \hline \end{array}$$

F.

$$\begin{array}{r} 46 \\ \times 8 \\ \hline 648 \end{array}$$

$$\begin{array}{r} 36 \\ \times 7 \\ \hline 492 \end{array}$$

$$\begin{array}{r} 137 \\ \times 4 \\ \hline 1208 \end{array}$$

$$\begin{array}{r} 46 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 39 \\ \times 4 \\ \hline \end{array}$$