**Long Division and Scaffolding Division** name:_____

Example: class time:_____

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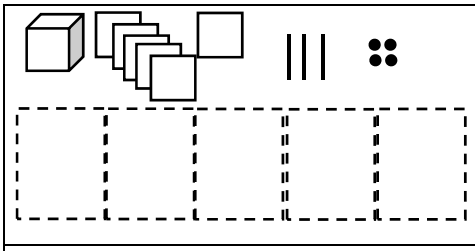
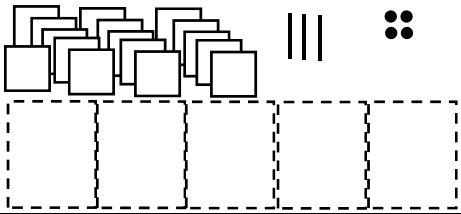
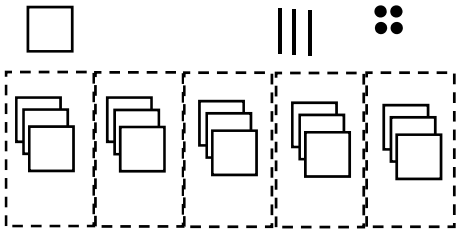
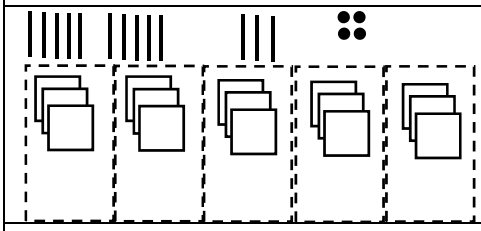
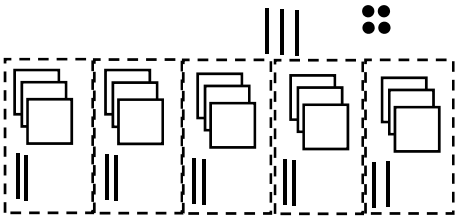
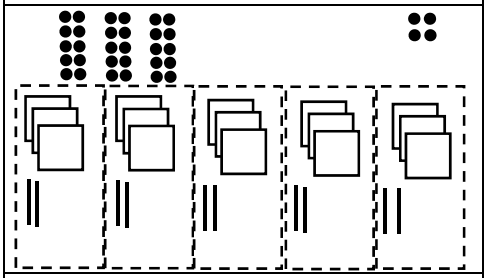
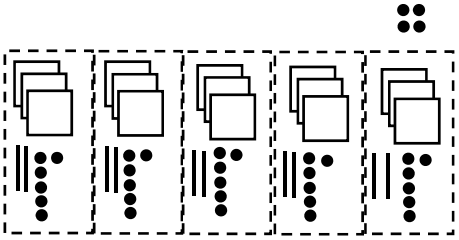
|---|---|---|
|  | $5\overline{)\,1634}$ | Take out the base 10 blocks for the number being divided (the dividend), and make groups to show the amount divided by (divisor) |
|  | | There aren't enough thousands to put one in each group, so trade the thousand for 10 hundreds.<br>That gives us 16 hundreds |
|  | $\begin{array}{r} 3 \\ 5\overline{)\,1634} \\ -15 \\ \hline 13 \end{array}$ | Distribute hundreds evenly to the groups. There will be 3 hundreds in each group (write the hundreds place of the quotient). In all we distributed 15 hundreds (write that they are used), so there is 1 hundred left (write difference) |
|  | | We can't distribute any more hundreds, so we trade our remaining hundred for 10 tens. This give us 13 tens (write the 3 tens next to the 1 hundred remaining to show 13 tens) |
|  | $\begin{array}{r} 32 \\ 5\overline{)\,1634} \\ -15 \\ \hline 13 \\ -10 \\ \hline 34 \end{array}$ | Distribute as many tens as we can to the groups. In all, we put 2 tens in each group (write in tens place of the quotient). In all, we used 10 tens (write that in the work space), and there are 3 tens left (write that as the difference) |
|  | | We can't distribute any more tens, so we trade each of the 3 tens for 10 ones. Now we have 34 ones. Write the 4 ones next to the 3 for 3 tens to show 34 ones are left |
|  | $\begin{array}{r} 326R4 \\ 5\overline{)\,1634} \\ -15 \\ \hline 13 \\ -10 \\ \hline 34 \\ -30 \\ \hline 4 \end{array}$ | Distribute as many ones as we can evenly to the groups. There are 6 ones in each group (write in quotient). In all we used 30 ones (write in work space), and there are 4 left (write as the difference and as the remainder. |

1. Fill in the missing parts of this long division explanation:

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|---|---|---|
| | $3\overline{)\,434}$ | Take out the base 10 blocks for the number being divided (the dividend), and make groups to show the amount divided by (divisor) |
| | | Distribute hundreds evenly to the groups. There are ____ hundreds in each group (write it in the hundreds place of the quotient). In all we distributed ____ hundreds (write that they are used), so there is ____ hundred left (write difference) |
| | | We can't distribute any more hundreds, so we trade our remaining hundreds for 10 tens each. This give us ____ tens |
| | | Distribute tens to the groups. We put ____ tens in each group (write in tens place of the quotient). In all, we used _____ tens (write that in the work space), and there are ____ tens left (write that as the difference) |
| | | We can't distribute any more tens, so we trade each of the remaining tens for 10 ones. Now we have ____ ones. |
| | | Distribute as many ones as we can evenly to the groups. There are ____ ones in each group (write in quotient). In all we used ____ ones (write in work space), and there are ____ left (write as the difference and as the remainder. |

| | | |
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| 2. Draw what the manipulatives would look at this point in the long division algorithm. | $$\begin{array}{r} 35 \\ 4\overline{)\,1429} \\ \underline{-12} \\ 22 \\ \underline{-20} \\ 29 \end{array}$$ | Explain what each of the numbers represents in the manipulatives and the problem:<br>a. What is 4?<br><br>b. What is 35?<br><br>c. What is 29? |
| 3. Draw what the manipulatives would look at this point in the long division algorithm. | $$\begin{array}{r} 4 \\ 6\overline{)\,2729} \\ \underline{-24} \\ 32 \end{array}$$ | Explain what each of the numbers represents in the manipulatives and the problem:<br>a. What is 6?<br><br>b. What is 4?<br><br>c. What is 32? |
| 4. Draw what the manipulatives would look at this point in the long division algorithm. | $$\begin{array}{r} 26 \\ 3\overline{)\,805} \\ \underline{-6} \\ 20 \\ \underline{-18} \\ 25 \end{array}$$ | Explain what each of the numbers represents in the manipulatives and the problem:<br><br>a. What is 3?<br><br>b. What is 26?<br><br>c. What is 25? |

**Scaffolding Division Example:**

| | | |
|---|---|---|
| 100 100 100 100 100 | $\begin{array}{r} 100 \\ 5\overline{)\,1634} \\ -500 \\ \hline 1134 \end{array}$ $\begin{array}{r\|l} 5\overline{)1634} & \\ -500 & 100 \\ \hline 1134 & \end{array}$ | We will share 1634 units into 5 groups. How many can we put into each group? We can put 100 into each group. Then 1134 are left. |
| 100 100 100 100 100<br>200 200 200 200 200 | $\begin{array}{r} 200 \\ 100 \\ 5\overline{)\,1634} \\ -500 \\ \hline 1134 \\ -1000 \\ \hline 134 \end{array}$ $\begin{array}{r\|l} 5\overline{)\,1634} & \\ -500 & 100 \\ \hline 1134 & \\ -1000 & 200 \\ \hline 134 & \end{array}$ | We can put 200 more into each group. That uses 1000. Then 134 are left. |
| 100 100 100 100 100<br>200 200 200 200 200<br>20 20 20 20 20 | $\begin{array}{r} 20 \\ 200 \\ 100 \\ 5\overline{)\,1634} \\ -500 \\ \hline 1134 \\ -1000 \\ \hline 134 \\ -100 \\ \hline 34 \end{array}$ $\begin{array}{r\|l} 5\overline{)\,1634} & \\ -500 & 100 \\ \hline 1134 & \\ -1000 & 200 \\ \hline 134 & \\ -100 & 20 \\ \hline 34 & \end{array}$ | We can put 20 more into each group. That uses 100. Then 34 are left. |
| 100 100 100 100 100<br>200 200 200 200 200<br>20 20 20 20 20<br>6 6 6 6 6 | $\begin{array}{l} 326R4 \\ 6 \\ 20 \\ 200 \\ 100 \\ 5\overline{)\,1634} \\ -500 \\ \hline 1134 \\ -1000 \\ \hline 134 \\ -100 \\ \hline 34 \\ -30 \\ \hline 4 \end{array}$ $\begin{array}{r\|l} 326\ R4 & \\ 5\overline{)\,1634} & \\ -500 & 100 \\ \hline 1134 & \\ -1000 & 200 \\ \hline 134 & \\ -100 & 20 \\ \hline 34 & \\ -30 & 6 \\ \hline 4 & 326 \end{array}$ | We can put 6 more into each group. That uses 30. Then 4 are left.<br><br>In all there are 326 in each group and 4 extra are left. |

5. Show how to solve by scaffolding with writing amounts into groups: $1847 \div 4$

6. Show how to solve by scaffolding with just the numbers: a. $2375 \div 8$ b. $4893 \div 12$ c. $7326 \div 18$