INFORMAL MATH PROBES – GRADE 4

______________________________ can correctly

NUMERATION & PLACE VALUE:
• Read numbers from .01 to 1 million in _____/5 attempts.
• Write numbers from .01 to 1 million in _____/5 attempts.
• Round whole numbers to the nearest thousand in _____/5 attempts.

ADDITION & SUBTRACTION:
• Add 3 columns of 5 numbers in _____/5 attempts.
• Subtract 4-digit numbers with 0s in the tens and hundreds place in ____/5 attempts.
• Add decimals with the same number of places. ____/5 attempts
• Subtract decimals with the same number of places. ____/5 attempts
• Estimate sums by rounding to the nearest 10 in ____/5 attempts.
• Estimate differences rounding to the nearest hundred in ____/5 attempts.

MULTIPLICATION:
• Multiplication facts (0-12) with ____% accuracy at rate of _____ facts in ______ minutes, _____ seconds.
• Multiply a 3-digit number by a 1-digit number in ____/5 attempts.
• Multiply a 2-digit number by a 2-digit number in ____/5 attempts.
• Multiply a 3-digit number by a 2-digit number in ____/5 attempts.

DIVISION:
• Division facts with ____% accuracy at a rate of _____ facts in ____ minutes.
• Divide a 2-digit number by a 1-digit number. ____/5 attempts
• Divide a 3-digit number by a 1-digit number. ____/5 attempts

PROBLEM SOLVING:
• Solve ____/5 4th grade word problems.

CLASSROOM WORK:
• Daily assignments done with ____% accuracy.
• Chapter test scores range from ____% to ____ % accuracy.
Name ______________________________________ Date _______________________

NUMERATION & PLACE VALUE:
Read numbers from .01 to 1 million:

.5  115,609  975,254  .75  698,001

______/5 attempts

Write numbers from .01 to 1 million:

________ ________ ________ ________ _________

_____/5 attempts

Round numbers to the nearest thousandth:

6,742  41,256  80,054  10,942  61,545

________ ________ ________ ________ _________

_____/5 attempts

ADDITION & SUBTRACTION:

\[
\begin{array}{ccccc}
638 & 217 & 418 & 167 & 822 \\
125 & 609 & 117 & 275 & 342 \\
812 & 843 & 212 & 317 & 554 \\
690 & 701 & 376 & 254 & 822 \\
+123 & +245 & +532 & +256 & +372 \\
\hline
2388 & 2615 & 1655 & 1269 & 2912 \\
\end{array}
\]

/5 attempts

\[
\begin{array}{cccccc}
5403 & 2006 & 8003 & 6103 & 3005 \\
-1289 & -1127 & -3526 & -2315 & -1259 \\
\hline
4114 & 879 & 4477 & 3788 & 1746 \\
\end{array}
\]

/5 attempts

Add decimals with the same number of places:

\[
\begin{array}{cccccc}
.25 & .5 & .435 & .03 & .72 \\
+ .26 & +.7 & +.102 & +.25 & +.53 \\
\hline
0.51 & 1.2 & 0.537 & 0.28 & 1.25 \\
\end{array}
\]

/5 attempts
4th Grade Math Probes

Subtract decimals with the same number of places:

\[
\begin{array}{cccccc}
.5 & .752 & .023 & .25 & .3 \\
- .2 & - .431 & - .011 & - .15 & - .2 \\
0.3 & 0.321 & 0.012 & 0.10 & 0.1
\end{array}
\] /5 attempts

ESTIMATION:
Estimate sums by rounding to nearest ten.

\[
\begin{array}{c}
69 = 70 \\
+ 22 = 20 \\
90
\end{array}
\] 
\[
\begin{array}{c}
66 = 70 \\
+ 47 = 50 \\
120
\end{array}
\]

\[
\begin{array}{c}
\$37.52 = 38.00 \\
+ \$22.89 = 23.00 \\
\$61.00
\end{array}
\]
\[
\begin{array}{c}
\$126.35 = 126.00 \\
+ \$142.66 = 143.00 \\
\$269.00
\end{array}
\]

\[
\begin{array}{c}
\$12.76 = 13.00 \\
+ \$15.02 = 15.00 \\
\$28.00
\end{array}
\] /5

Estimate differences rounding to the nearest hundred:

\[
\begin{array}{c}
542 = 500 \\
- 167 = 200 \\
300
\end{array}
\]
\[
\begin{array}{c}
782 = 800 \\
- 276 = 300 \\
500
\end{array}
\]
\[
\begin{array}{c}
921 = 900 \\
- 680 = 700 \\
200
\end{array}
\]

\[
\begin{array}{c}
\$ 263.54 = 300.00 \\
- \$167.05 = 200.00 \\
\$100.00
\end{array}
\]
\[
\begin{array}{c}
\$725.89 = 700.00 \\
- \$422.35 = 400.00 \\
\$300.00
\end{array}
\] /5
MULTIPLICATION:
Multiply a 3-digit number by a 1-digit number:

<table>
<thead>
<tr>
<th></th>
<th>267</th>
<th>173</th>
<th>485</th>
<th>196</th>
<th>247</th>
</tr>
</thead>
<tbody>
<tr>
<td>x3</td>
<td>x4</td>
<td>x2</td>
<td>x4</td>
<td>x3</td>
<td></td>
</tr>
<tr>
<td>801</td>
<td>692</td>
<td>970</td>
<td>784</td>
<td>741</td>
<td></td>
</tr>
</tbody>
</table>

Multiply a 2-digit number by a 2-digit number:

<table>
<thead>
<tr>
<th></th>
<th>39</th>
<th>46</th>
<th>95</th>
<th>84</th>
<th>73</th>
</tr>
</thead>
<tbody>
<tr>
<td>x67</td>
<td>x58</td>
<td>x27</td>
<td>x36</td>
<td>x49</td>
<td></td>
</tr>
<tr>
<td>2613</td>
<td>2668</td>
<td>2565</td>
<td>3024</td>
<td>3577</td>
<td></td>
</tr>
</tbody>
</table>

Multiply a 3-digit number by a 2-digit number:

<table>
<thead>
<tr>
<th></th>
<th>604</th>
<th>703</th>
<th>807</th>
<th>508</th>
<th>901</th>
</tr>
</thead>
<tbody>
<tr>
<td>x25</td>
<td>x68</td>
<td>x42</td>
<td>x34</td>
<td>x78</td>
<td></td>
</tr>
<tr>
<td>15,100</td>
<td>47,804</td>
<td>33,894</td>
<td>17,272</td>
<td>70,278</td>
<td></td>
</tr>
</tbody>
</table>

DIVISION:
Divide a 2-digit number by a 1-digit number:

<table>
<thead>
<tr>
<th></th>
<th>19</th>
<th>18</th>
<th>17</th>
<th>25</th>
<th>27</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>57</td>
<td>72</td>
<td>85</td>
<td>75</td>
<td>54</td>
</tr>
</tbody>
</table>

Divide a 3-digit number by a 1-digit number:

<table>
<thead>
<tr>
<th></th>
<th>82</th>
<th>32</th>
<th>41</th>
<th>71</th>
<th>81</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>246</td>
<td>128</td>
<td>205</td>
<td>426</td>
<td>567</td>
</tr>
</tbody>
</table>
## Multiplication Facts

### 0-9

Name: _______________________________
Time: ______________ No. Correct: ____/100

<table>
<thead>
<tr>
<th></th>
<th>8</th>
<th>5</th>
<th>2</th>
<th>3</th>
<th>5</th>
<th>7</th>
<th>9</th>
<th>2</th>
<th>4</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>x 9</td>
<td>72</td>
<td>25</td>
<td>4</td>
<td>12</td>
<td>20</td>
<td>42</td>
<td>9</td>
<td>0</td>
<td>12</td>
<td>42</td>
</tr>
<tr>
<td>x 5</td>
<td>5</td>
<td>6</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>11</td>
<td>5</td>
<td>3</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>x 1</td>
<td>25</td>
<td>6</td>
<td>12</td>
<td>3</td>
<td>6</td>
<td>0</td>
<td>40</td>
<td>0</td>
<td>2</td>
<td>48</td>
</tr>
<tr>
<td>x 4</td>
<td>5</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>9</td>
<td>3</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>x 0</td>
<td>10</td>
<td>32</td>
<td>10</td>
<td>1</td>
<td>0</td>
<td>24</td>
<td>4</td>
<td>20</td>
<td>12</td>
<td>9</td>
</tr>
<tr>
<td>x 3</td>
<td>5</td>
<td>11</td>
<td>8</td>
<td>7</td>
<td>4</td>
<td>10</td>
<td>2</td>
<td>9</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>x 7</td>
<td>21</td>
<td>77</td>
<td>8</td>
<td>21</td>
<td>12</td>
<td>50</td>
<td>8</td>
<td>45</td>
<td>32</td>
<td>7</td>
</tr>
<tr>
<td>x 1</td>
<td>45</td>
<td>36</td>
<td>16</td>
<td>18</td>
<td>2</td>
<td>0</td>
<td>42</td>
<td>36</td>
<td>8</td>
<td>18</td>
</tr>
<tr>
<td>x 3</td>
<td>8</td>
<td>3</td>
<td>12</td>
<td>8</td>
<td>6</td>
<td>8</td>
<td>5</td>
<td>12</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>x 6</td>
<td>64</td>
<td>18</td>
<td>84</td>
<td>24</td>
<td>54</td>
<td>56</td>
<td>30</td>
<td>72</td>
<td>72</td>
<td>35</td>
</tr>
<tr>
<td>x 7</td>
<td>3</td>
<td>10</td>
<td>9</td>
<td>7</td>
<td>3</td>
<td>9</td>
<td>7</td>
<td>7</td>
<td>12</td>
<td>5</td>
</tr>
<tr>
<td>x 9</td>
<td>9</td>
<td>30</td>
<td>36</td>
<td>56</td>
<td>15</td>
<td>72</td>
<td>49</td>
<td>14</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>x 2</td>
<td>5</td>
<td>7</td>
<td>5</td>
<td>4</td>
<td>2</td>
<td>9</td>
<td>8</td>
<td>6</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>x 0</td>
<td>35</td>
<td>28</td>
<td>0</td>
<td>36</td>
<td>16</td>
<td>81</td>
<td>48</td>
<td>24</td>
<td>15</td>
<td>18</td>
</tr>
<tr>
<td>x 8</td>
<td>9</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>12</td>
<td>4</td>
<td>7</td>
<td>6</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>x 4</td>
<td>28</td>
<td>12</td>
<td>25</td>
<td>48</td>
<td>24</td>
<td>63</td>
<td>42</td>
<td>16</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>x 1</td>
<td>56</td>
<td>28</td>
<td>64</td>
<td>56</td>
<td>84</td>
<td>32</td>
<td>90</td>
<td>27</td>
<td>14</td>
<td>4</td>
</tr>
</tbody>
</table>
DIVISION FACTS

\[
\begin{array}{cccc}
\frac{8}{9} & \frac{6}{7} & \frac{3}{8} & \frac{5}{2} \\
\text{72} & \text{42} & \text{24} & \text{10} \\
\end{array}
\]

\[
\begin{array}{cccc}
\frac{1}{4} & \frac{3}{3} & \frac{9}{4} & \frac{8}{1} \\
\text{4} & \text{9} & \text{36} & \text{8} \\
\end{array}
\]

\[
\begin{array}{cccc}
\frac{2}{7} & \frac{0}{6} & \frac{3}{7} & \frac{6}{9} \\
\text{14} & \text{0} & \text{21} & \text{54} \\
\end{array}
\]

\[
\begin{array}{cccc}
\frac{0}{7} & \frac{2}{8} & \frac{1}{9} & \frac{8}{6} \\
\text{0} & \text{16} & \text{9} & \text{48} \\
\end{array}
\]

\[
\begin{array}{cccc}
\frac{7}{8} & \frac{5}{7} & \frac{0}{9} & \frac{5}{6} \\
\text{56} & \text{35} & \text{0} & \text{30} \\
\end{array}
\]

\[
\begin{array}{cccc}
\frac{9}{7} & \frac{1}{8} & \frac{5}{9} & \frac{1}{6} \\
\text{63} & \text{8} & \text{45} & \text{6} \\
\end{array}
\]

\[
\begin{array}{cccc}
\frac{4}{8} & \frac{4}{5} & \frac{4}{1} & \frac{6}{2} \\
\text{32} & \text{20} & \text{4} & \text{12} \\
\end{array}
\]

\[
\begin{array}{cccc}
\frac{7}{5} & \frac{2}{4} & \frac{5}{5} & \frac{5}{1} \\
\text{35} & \text{8} & \text{25} & \text{5} \\
\end{array}
\]

\[
\begin{array}{cccc}
\frac{8}{2} & \frac{7}{3} & \frac{3}{4} & \frac{8}{5} \\
\text{16} & \text{21} & \text{12} & \text{40} \\
\end{array}
\]

\[
\begin{array}{cccc}
\frac{8}{3} & \frac{6}{1} & \frac{6}{4} & \frac{6}{5} \\
\text{24} & \text{6} & \text{24} & \text{30} \\
\end{array}
\]
STORY PROBLEMS – GRADE 4

1. The family drank 18 liters of milk one week. They drank 7 liters the next week. How many liters did they drink in all? **They drank 25 liters in all.**

2. There were twenty-one desks in the math class. Twenty-seven students came to the class. How many more desks were needed to seat the students? **6 desks**

3. Wilbur received $0.45 for mowing the lawn and $0.85 for painting the dog house. How much did he earn? **$1.30** How much more does he need to buy a toy truck which costs $2.85? **$1.55**

4. The Red Sox scored 18 runs in 6 innings. If they scored the same number of runs in each inning, how many runs did they make in each inning? **3 runs in each inning.**

5. In basketball, 5 fouls and you’re out of the game. Four players were out on fouls. How many fouls were made by these players? **20 fouls were made.**