## Depth of Knowledge Matrix - Fifth Grade Math

\begin{tabular}{|c|c|c|c|c|}
\hline Topic \& Evaluating Expressions \& Rounding Decimals \& Multi-Digit Multiplication \& Multiplying Decimals \\
\hline CCSS Stand. \& - 5.OA. 1 \& - 5. NBT. 4 \& - 5.NBT. 5 \& - 5.NBT. 7 \\
\hline \begin{tabular}{l}
DOK 1 \\
Example
\end{tabular} \& Evaluate the expression.
\[
56 \div(8-1)
\] \& Round the decimal to the nearest tenth.
\[
7.163
\] \& Find the product.
\[
37 \times 45
\] \& Solve.
\[
3.4 \times 2.5=
\] \\
\hline \begin{tabular}{l}
DOK 2 \\
Example
\end{tabular} \& Using the digits 0 through 9 , at most one time each, place a digit in each box to create two true statements: one where the value on each side of the equal sign is greater than 30 and one where it's less than 30 . You may reuse all the digits for each equation.
\[
\square \square \div(\square-\square)=\square+\square \times \square
\] \& Using the digits 0 to 9 at most one time each, place a digit in each box to create two different decimals that are equivalent when rounded to the nearest tenth.

$\square$ \& Using the digits 0 to 9 at most one time each, place a digit in each box to create a true equation.
$\square$ $\times$ $\square$ = $\square$ \& Using the digits 1 to 9 at most one time each, fill in the boxes to make a true number sentence.
$\square$ $\times 3.2=$ $\square$ I. <br>

\hline | DOK 3 |
| :--- |
| Example | \& Using the digits 0 through 9, at most one time each, place a digit in each box to create the greatest possible value.

\[
\square \square \div(\square-\square)=\square+\square \times \square

\] \& Using the digits 0 to 9 at most one time each, place a digit in each box to create two different decimals that are equivalent when rounded to the nearest tenth and have the least possible value. \& | Using the digits 0 to 9 at most one time each, place a digit in each box to create a true equation with the greatest possible product. $\square$ |
| :--- |
|  |
| $\times$ $\square$ = $\square$ | \& Using the digits 1 to 9 at most one time each, fill in the boxes so that the product is as close to 50 as possible.

$\square$ $\times$ $\square$ $=$ <br>
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\end{tabular}

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More free DOK 2 \& 3 problems available at openmiddle.com
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## Depth of Knowledge Matrix - Fifth Grade Math

| Topic | Subtracting Mixed Numbers | Multiplying Fractions | Fraction Division | Volume of Rectangular Prisms |
| :---: | :---: | :---: | :---: | :---: |
| CCSS Stand. | - 5.NF. 1 | - 5.NF. 2 | - 5.NF. 7 | - 5.MD. 5 |
| DOK 1 <br> Example | Find the difference. $5 \frac{1}{2}-4 \frac{2}{3}$ | Find the product. $\frac{3}{7} \times \frac{2}{9}$ | Find the quotient. $8 \div \frac{1}{5}$ | Find the volume of a rectangular prism with side lengths of 3,7 , and 4 units. |
| DOK 2 <br> Example | Using the digits 1 to 9 at most one time each, fill in the boxes to create three different mixed numbers that will make the equation true. You may reuse the same digits for each of the three mixed numbers. $5 \frac{4}{5}-\sqrt{20}$ | Using the digits 1 to 9 at most one time each, place a digit in each box to make a true equation. $\square \times \frac{\square}{\square}=\frac{2}{3}$ | Using the digits 1 through 9, at most one time each, place a digit in each box to create two true equations: one where the quotient is greater than 40 and one where it's less than 40. You may reuse the same digits for each of the equations. | Using the digits 1 through 9, at most one time each, place a digit in each box to create two rectangular prisms where the larger one has double the volume of the other. |
| DOK 3 <br> Example | Using the digits 1 to 9 at most one time each, fill in the boxes to make the smallest difference. | Using the digits 1 to 9 at most one time each, place a digit in each box to make a product that's as close to 4/11 as possible. | Using the digits 1 through 9, at most one time each, place a digit in each box to create an equation with the greatest possible quotient. | Using the digits 1 through 9, at most one time each, place a digit in each box to create two rectangular prisms where the larger one has the greatest possible volume and is double the volume of the other. |

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