Depth of Knowledge Matrix – Sixth Grade Math

Topic	Percent of a Quantity	Ratios and Unit Rates	Dividing Fractions	Multiplying Decimals
CCSS Stand.	• 6.RP.3c	• 6.RP1 & 6.RP.2	• 6.NS.1	• 6.NS.3
DOK 1 Example	Evaluate. 24 is 30% of what number?	Fill in the blank to make an equivalent ratio. $\_\_ : 7 = 8 : 14$	Find the quotient. $\frac{4}{9} \div \frac{2}{5}$	Find the product. $3.74 \cdot 4.29$
DOK 2 Example	Using the digits 0 to 9 at most one time each, fill in the boxes to make two true statements without rounding. You may reuse all the digits for your second statement. □□ is □□% of □□	Using the digits 0 to 9 at most one time each, fill in the boxes to make an equivalent ratio. □ : □ = □□ : □	Using the digits 1 to 9 at most one time each, fill in the boxes to make two different pairs of fractions that have a quotient of 2/3. You may reuse all the digits for each equation. $\frac{\square}{\square} \div \frac{\square}{\square} = \frac{2}{3}$	Using the digits 1 to 9 at most one time each, fill in the boxes to make a whole number product. □.□ · □.□□
DOK 3 Example	Using the digits 0 to 9 at most one time each, fill in the boxes to make a true statement with the greatest possible whole without rounding. □□ is □□% of □□	Using the digits 0 to 9 at most one time each, fill in the boxes to make an equivalent ratio with a unit rate that has greatest possible value. □ : □ = □□ : □	Using the digits 1 to 9 at most one time each, fill in the boxes to make two fractions that have a quotient that is as close to 4/11 as possible. $\frac{\square}{\square} \div \frac{\square}{\square}$	Using the digits 1 to 9 at most one time each, fill in the boxes to make a product with the greatest possible value. □.□□ · □.□□

Depth of Knowledge Matrix – Sixth Grade Math

Topic	Distributive Property	One-Step Equations	Mean, Median, and Range	Surface Area and Volume
CCSS Stand.	• 6.EE.3	• 6.EE.7	• 6.SP.5c	• 6.G.2 & 6.G.4
DOK 1 Example	Simplify the expression. $3(x+7)$	Solve for x. $21+x=70$	Find the mean, median, and range of the integers: $3, 7, 8, 12, 14$	Find the surface area of a rectangular prism that measures 3 units by 4 units by 5 units.
DOK 2 Example	Using the digits 0 to 9 at most one time each, fill in the boxes to make an equation. $\square(\square+\square)=\square\square+\square\square$	Use the digits 1 to 9, at most one time each, to create two equations: one where x has a positive value and one where x has a negative value. You may reuse all the digits for each equation. $\square\square+x=\square\square$	Create a set of five positive integers from 1 to 20 so that the values of their mean, median, and range are the same.	List the measurements of three different rectangular prisms that each have a surface area of 20 square units.
DOK 3 Example	Using the digits 0 to 9 at most one time each, fill in the boxes to make an equation where both sides have the greatest possible value. $\square(\square+\square)=\square\square+\square\square$	Use the digits 1 to 9, at most one time each, to create an equation where x has the greatest possible value. $\square\square+x=\square\square$	Create a set of five positive integers from 1 to 20 so that the values of their mean, median, and range are the same and have the greatest possible value.	What is the greatest volume you can make with a rectangular prism that has a surface area of 20 square units?