Depth of Knowledge Matrix – Fifth Grade Math

Topic	Evaluating Expressions	Rounding Decimals	Multi-Digit Multiplication	Multiplying Decimals			
CCSS Stand.	• 5.0A.1	• 5. NBT.4	• 5.NBT.5	• 5.NBT.7			
DOK 1 Example	Evaluate the expression.	Round the decimal to the	Find the product.	Solve.			
Example	$56 \div (8-1)$	7.163	37 × 45	$3.4 \times 2.5 =$			
DOK 2 Example	Using the digits 0 through 9, at most one time each, place a digit in each box to create two true	Using the digits 0 to 9 at most one time each, place a digit in each box to create	Using the digits 0 to 9 at most one time each, place a digit in each box to create a true	Using the digits 1 to 9 at most one time each, fill in the boxes to make a 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.	two different decimals that are equivalent when rounded to the nearest tenth.	equation.	number sentence.			
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. $\square \div (\square - \square) = \square + \square \times \square$	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.	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.			
Robert Kaplinsky More free DOK 2 & 3 problems available at openmiddle.com © 2019 Robert Kaplinsky, robertkaplinsky.com							

Торіс	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	Find the difference.	Find the product.	Find the quotient.	Find the volume of a
Example	$5\frac{1}{2}-4\frac{2}{3}$	$\frac{3}{7} \times \frac{2}{9}$	$8 \div \frac{1}{5}$	rectangular prism with side lengths of 3, 7, and 4 units.
DOK 2	Using the digits 1 to 9 at	Using the digits 1 to 9	Using the digits 1 through 9, at most	Using the digits 1 through 9,
Example	most one time each, fill in the	at most one time each,	one time each, place a digit in each	at most one time each, place a
	boxes to create three	place a digit in each box	box to create two true equations:	digit in each box to create two
	different mixed numbers that	to make a true	one where the quotient is greater	rectangular prisms where the
	will make the equation true.	equation.	than 40 and one where it's less than	larger one has double the
	You may reuse the same	,	40. You may reuse the same digits	volume of the other.
	digits for each of the three	2	for each of the equations.	
	$5\frac{4}{5} - \boxed{3\frac{1}{20}} = 3\frac{1}{20}$	X = 3	$\Box \div \frac{1}{\Box} = \Box$	
DOK 3	Using the digits 1 to 9 at	Using the digits 1 to 9	Using the digits 1 through 9, at most	Using the digits 1 through 9,
Example	most one time each, fill in the	at most one time each,	one time each, place a digit in each	at most one time each, place a
	boxes to make the smallest	place a digit in each box	box to create an equation with the	digit in each box to create two
	difference.	to make a product	greatest possible quotient.	rectangular prisms where the
		that's as close to 4/11	1	larger one has the greatest
		as possible.		possible volume and is double
	•••••			the volume of the other.

Depth of Knowledge Matrix – Fifth Grade Math

More free DOK 2 & 3 problems available at openmiddle.com

Robert Kaplinsky