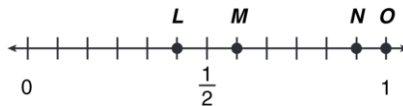
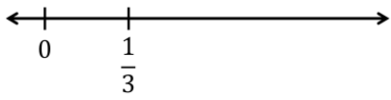


# Depth of Knowledge Matrix – Fourth Grade Math

Topic	Fractions on a Number Line	Comparing Fractions	Adding Mixed Numbers	Comparing Decimals
CCSS Stand.	• 4.NF.2	• 4.NF.2	• 4.NF.3a	• 4.NF.7
DOK 1 Example	Which point is located at $\frac{7}{12}$ below? 	Compare the fractions using a $<$ , $>$ , or $=$ sign. $\frac{3}{8}$ $\frac{4}{7}$	Find the sum. $3\frac{5}{8} + 2\frac{7}{8} =$	Compare the decimals using a $<$ , $>$ , or $=$ sign. 6.714      8.023
DOK 2 Example	Label the point where $\frac{3}{5}$ belongs on the number line below. Be as precise as possible. 	Using the digits 1 to 9 at most one time each, place a digit in each box to create a true statement. $\frac{\square}{\square} < \frac{\square}{\square} < \frac{\square}{\square}$	Using the digits 1 to 9 at most one time each, place a digit in each box to make a true equation. $\square\frac{\square}{8} + \square\frac{\square}{8} = \square\frac{\square}{8}$	Using the digits 0 to 9 at most one time each, place a digit in each box to create two different decimals: one that is greater than 5 and one that is less than 5. $\square.\square\square\square$ $\square.\square\square\square$
DOK 3 Example	Using the digits 0 to 9 at most one time each, place a digit in each box to create five fractions and place them all on a number line with the correct order and spacing. $\frac{\square}{\square}, \frac{\square}{\square}, \frac{\square}{\square}, \frac{\square}{\square}, \frac{\square}{\square}$	Using the digits 1 to 9 at most one time each, place a digit in each box to create a fraction as close to one as possible. $\frac{\square\square}{\square\square}$	Using the digits 1 to 9 at most one time each, place a digit in each box to make a true equation with the smallest possible sum. $\square\frac{\square}{8} + \square\frac{\square}{8} = \square\frac{\square}{8}$	Using the digits 0 to 9 at most one time each, place a digit in each box to create two decimals that are close to 5 as possible but also equally far away from 5. $\square.\square\square\square$ $\square.\square\square\square$

# Depth of Knowledge Matrix – Fourth Grade Math

Topic	Adding Multiples	Multiplying Differences	Multi-Digit Division	Patterns
CCSS Stand.	• 4.NBT.4 and 4.NBT.5	• 4.NBT.4 and 4.NBT.5	• 4.NBT.6	• 4.OA.5
DOK 1 Example	Find the sum.  $(6 \times 3) + (4 \times 9)$	Find the product.  $3(7 - 4)$	Find the quotient.  $756 \div 3$	Create a number pattern that increases by 8 each time.
DOK 2 Example	Using the digits 0 to 9, at most one time each, fill in the boxes to make a true statement.  $(\square \times \square) + (\square \times \square) = \square\square$	Using the digits 1 to 9 at most one time each, place a digit in each box to make a true statement.  $\square(\square - \square) = \square\square$	Using the digits 1 through 9 at most one time each, place a digit in each box to create two different whole number quotients: one that is greater than 300 and one that is less than 300. You may reuse all the digits each time.  $\square\square\square \div \square$	Using the digits 1 to 9 at most one time each, place a digit in each box to make a true pattern.  $\square, \square\square, \square\square$ increases by $\square$
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 product.  $(\square \times \square) + (\square \times \square) = \square\square$	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 50 as possible.  $\square(\square - \square) = \square\square$	Using the digits 1 through 9 at most one time each, place a digit in each box to create the smallest whole number quotient possible.  $\square\square\square \div \square$	Using the digits 1 to 9 at most one time each, place a digit in each box to make a true pattern where the pattern increases by the smallest amount possible.  $\square, \square\square, \square\square$ increases by $\square$