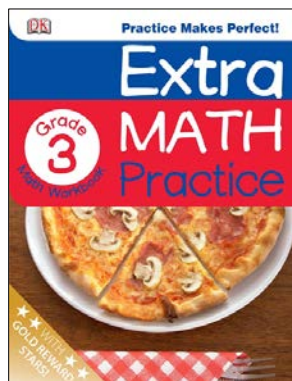


# DK Common Core State Standards Alignment for Mathematics

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## Represent and solve problems involving multiplication and division.

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- **CCSS.Math.Content.3.OA.A.1** Interpret products of whole numbers, e.g., interpret  $5 \times 7$  as the total number of objects in 5 groups of 7 objects each. *For example, describe a context in which a total number of objects can be expressed as  $5 \times 7$ .*
- **CCSS.Math.Content.3.OA.A.2** Interpret whole-number quotients of whole numbers, e.g., interpret  $56 \div 8$  as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. *For example, describe a context in which a number of shares or a number of groups can be expressed as  $56 \div 8$ .*
- **CCSS.Math.Content.3.OA.A.3** Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.<sup>1</sup>
- **CCSS.Math.Content.3.OA.A.4** Determine the unknown whole number in a multiplication or division equation relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations  $8 \times ? = 48$ ,  $5 = \_ \div 3$ ,  $6 \times 6 = ?$*

## Understand properties of multiplication and the relationship between multiplication and division.

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- **CCSS.Math.Content.3.OA.B.6** Understand division as an unknown-factor problem. *For example, find  $32 \div 8$  by finding the number that makes 32 when multiplied by 8.*



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## Multiply and divide within 100.

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- **CCSS.Math.Content.3.OA.C.7** Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that  $8 \times 5 = 40$ , one knows  $40 \div 5 = 8$ ) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

## Solve problems involving the four operations, and identify and explain patterns in arithmetic.

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- **CCSS.Math.Content.3.OA.D.8** Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.<sup>3</sup>

## Use place value understanding and properties of operations to perform multi-digit arithmetic.<sup>1</sup>

- **CCSS.Math.Content.3.NBT.A.1** Use place value understanding to round whole numbers to the nearest 10 or 100.
- **CCSS.Math.Content.3.NBT.A.2** Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.
- **CCSS.Math.Content.3.NBT.A.3** Multiply one-digit whole numbers by multiples of 10 in the range 10–90 (e.g.,  $9 \times 80$ ,  $5 \times 60$ ) using strategies based on place value and properties of operations.

## Develop understanding of fractions as numbers.

- **CCSS.Math.Content.3.NF.A.1** Understand a fraction  $1/b$  as the quantity formed by 1 part when a whole is partitioned into  $b$  equal parts; understand a fraction  $a/b$  as the quantity formed by a parts of size  $1/b$ .
- **CCSS.Math.Content.3.NF.A.3** Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size.
- **CCSS.Math.Content.3.NF.A.3a** Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line.

## Solve problems involving measurement and estimation.

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- **CCSS.Math.Content.3.MD.A.1** Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.



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## Represent and interpret data.

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- **CCSS.Math.Content.3.MD.B.3** Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step “how many more” and “how many less” problems using information presented in scaled bar graphs. *For example, draw a bar graph in which each square in the bar graph might represent 5 pets.*
- **CCSS.Math.Content.3.MD.B.4** Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units— whole numbers, halves, or quarters.

## Reason with shapes and their attributes.

- **CCSS.Math.Content.3.G.A.1** Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.
- **CCSS.Math.Content.3.G.A.2** Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. *For example, partition a shape into 4 parts with equal area, and describe the area of each part as  $\frac{1}{4}$  of the area of the shape.*

