

*These math worksheets have been created with Iowa Core Mathematics Standards in place for K-6. For each worksheet, the relevant standards are listed.*

## Kindergarten

**Counting Part 1** - Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects. (K.CC.B.5) (DOK 2)

**Counting Part 2** - Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects). (K.CC.A.3) (DOK 1)

**More or Fewer** - Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.1 (K.CC.C.6) (DOK 2)

**Geometry** - Correctly name shapes regardless of their orientations or overall size. (K.G.A.2) (DOK 1)  
*AND* Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects. (K.CC.B.5) (DOK 2)

## 1<sup>st</sup> Grade

**Addition and Subtraction** - Add and subtract within 20. (1.OA.C)

**Comparing Two-Digit Numbers** - Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols  $>$ ,  $=$ , and  $<$ . (1.NBT.B.3) (DOK 2)

**Representing and Organizing Data** - Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another. (1.MD.C.4) (DOK 2,3)

**Telling Time** - Tell and write time in hours and half-hours using analog and digital clocks. (1.MD.B.3) (DOK 1)

## 2<sup>nd</sup> Grade

**Addition** - Represent and solve problems involving addition and subtraction. (2.OA.A)

**Subtraction** - Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers. (2.OA.B.2) (DOK 1)

**Measuring** - Measure and estimate lengths in standard units. (2.MD.A)

**Telling Time** - Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m. (2.MD.C.7) (DOK 1)

## 3<sup>rd</sup> Grade

**Addition and Subtraction** - 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. (3.NBT.A.2) (DOK 1,2)

**Multiplication** - 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. (3.OA.C.7) (DOK 1,2)

**Division** - 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. (3.OA.C.7) (DOK 1,2)

**Comparing Fractions** - Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size.

- a. Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line.
- b. Recognize and generate simple equivalent fractions, e.g.,  $1/2 = 2/4$ ,  $4/6 = 2/3$ . Explain why the fractions are equivalent, e.g., by using a visual fraction model.
- c. Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. Examples: Express 3 in the form  $3 = 3/1$ ; recognize that  $6/1 = 6$ ; locate  $4/4$  and 1 at the same point of a number line diagram.
- d. Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols  $>$ ,  $=$ , or  $<$ , and justify the conclusions, e.g., by using a visual fraction model. (3.NF.A.3) (DOK 1,2,3)

## 4<sup>th</sup> Grade

**Addition and Subtraction Word Problems** - Use the four operations with whole numbers to solve problems. (4.OA.A)

**Multiplication Word Problems** - Use the four operations with whole numbers to solve problems. (4.OA.A)

**Rounding** - Use place value understanding to round multi-digit whole numbers to any place. (4.NBT.A.3) (DOK 1)

**Comparing Fractions** - Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as  $\frac{1}{2}$ . Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols  $>$ ,  $=$ , or  $<$ , and justify the conclusions, e.g., by using a visual fraction model. (4.NF.A.2) (DOK 1,2,3)

## 5<sup>th</sup> Grade

**Decimal Multiplication Word Problems** - Perform operations with multi-digit whole numbers and with decimals to hundredths. (5.NBT.B)

**Comparing Decimals** - Compare two decimals to thousandths based on meanings of the digits in each place, using  $>$ ,  $=$ , and  $<$  symbols to record the results of comparisons. (5.NBT.A.3) (DOK 1)

**Graphing Points** - Graph points on the coordinate plane to solve real-world and mathematical problems. (5.G.A)

**Volume** - Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume.

- a. Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. Represent threefold whole-number products as volumes, e.g., to represent the associative property of multiplication.
- b. Apply the formulas  $V = l \times w \times h$  and  $V = b \times h$  for rectangular prisms to find volumes of right rectangular prisms with whole-number edge lengths in the context of solving real world and mathematical problems.
- c. Recognize volume as additive. Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real world problems. (5.MD.C.5) (DOK 1,2)

## 6<sup>th</sup> Grade

**Writing and Solving Simple Equations** - Solve real-world and mathematical problems by writing and solving equations of the form  $x + p = q$  and  $px = q$  for cases in which  $p$ ,  $q$  and  $x$  are all nonnegative rational numbers. (6.EE.B.7) (DOK 1,2)

**Unit Rate Problems** - Understand ratio concepts and use ratio reasoning to solve problems. (6.RP.A)

**Mean, Median, Mode, and Range** - Summarize numerical data sets in relation to their context, such as by:

- a. Reporting the number of observations.
- b. Describing the nature of the attribute under investigation, including how it was measured and its units of measurement.
- c. Giving quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered.
- d. Relating the choice of measures of center and variability to the shape of the data distribution and the context in which the data were gathered. (6.SP.B.5) (DOK 1,2,3)

**Comparing Integers** - Understand ordering and absolute value of rational numbers.

- a. Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram. For example, interpret  $-3 > -7$  as a statement that  $-3$  is located to the right of  $-7$  on a number line oriented from left to right. (6.NS.C.7) (DOK 1,2)