Grade 2 Mathematics Performance Level Descriptors

Limited

A student performing at the **Limited Level** demonstrates a minimal command of Ohio's Learning Standards for Grade 2 Mathematics. A student at this level has an **emerging ability** to solve problems involving addition and subtraction within 100, understand place value to 1,000, measure lengths, and reason with shapes.

A student whose performance lies within the **Limited Level** typically can:

- Carry out some routine procedures to solve straightforward one-step problems.
- Recognize solutions to some simple computations, straightforward problems.
- Compute a few grade-level numbers and operations accurately.
- Recognize a few grade-level mathematical concepts, terms, and properties, and use previous grade-level mathematical concepts, terms, and properties.

A student at the **Limited Level** can:

- Solve addition and subtraction problems within 20 using models and pictures (see Table 1 of the Ohio Learning Standards). (2.OA.1-2)
- Identify even and odd numbers up to 10 using manipulatives and pictures. (2.OA.3)
- Identify place value meanings in two-digit numbers. (2.NBT.1)
- Count forward by ones to 100. (2.NBT.2)
- Read and write numbers to 100. (2.NBT.3)
- Compare two-digit numbers using informal language. (2.NBT.4)
- Add and subtract two-digit numbers without regrouping using models or pictures. (2.NBT.5)
- Identify the appropriate measurement tool to measure length in standardized units. (2.MD.1)
- Identify the appropriate measurement tool and units to tell time. (2.MD.7)
- Identify the meanings of the different hands on an analog clock. (2.MD.7)
- Tell time to the hour on an analog clock. (2.MD.7)
- Identify pennies, nickels, and dimes by their name and value. (2.MD.8)
- Sort data into categories. (2.MD.10)
- Identify basic shapes (e.g., triangle, rectangle, square). (2.G.1)

Basic

A student performing at the **Basic Level** demonstrates an appropriate command of Ohio's Learning Standards for Grade 2 Mathematics. A student at this level has a **general ability** to solve simple problems using models, count and compare numbers, and identify basic shapes and measurements with some accuracy.

A student whose performance falls within the **Basic Level** typically can**:**

- Carry out routine procedures.
- Solve simple problems using models.
- Compute some grade-level numbers and operations accurately.
- Recall and recognize some grade-level mathematical concepts, terms, and properties, and use more previous grade-level mathematical concepts, terms, and properties.

A student at the **Basic Level** can:

- Solve one-step addition and subtraction problems within 100 using strategies and models (see Table 1 of the Ohio Learning Standards). (2.OA.1)
- Fluently adds and subtracts within 20 using strategies and models. (2.OA.2)
- Identify even and odd numbers up to 10 using manipulatives and pictures. (2.OA.3)
- Use manipulatives and pictures to represent repeated addition to find totals. (2.OA.4)
- Use models to identify the place value meaning of each digit in a three-digit number. (2.NBT.1)
- Identify place value meaning for the value of each digit in a two-digit number (e.g., 23 has two 10s and three 1s). (2.NBT.1)
- Model 100 as a bundle of ten tens. (2.NBT.1)
- Model multiples of 100 as corresponding bundles of 100 up to 500. (2.NBT.1)
- Count forward and backward by tens and fives up to 100. (2.NBT.2)
- Read and write numbers to 1,000 using base 10 numerals and number names. (2.NBT.3)
- Compare three-digit numbers using >, <, = with models. (2.NBT.4)
- Add and subtract two-digit numbers without regrouping using models. (2.NBT.5)
- Measure length using standardized measurement tools with some accuracy. (2.MD.1)
- Estimate length measurements using standardized units. (2.MD.3)
- Tell time to the nearest 5 minutes using an analog clock. (2.MD.7)
- Identify quarters, dimes, nickels, and pennies and their values. (2.MD.8)
- Find the total value of small collections of coins without regrouping using models. (2.MD.8)
- Measure lengths of objects to the nearest whole unit or by making repeated measurements of the same object. (2.MD.9)
- Complete a given line plot where the horizontal scale is marked off in whole-number units when provided the data. (2.MD.9)
- Organize data into a bar graph with a single-unit scale. (2.MD.10)
- Name and describe two-dimensional shapes and three-dimensional figures using the number of sides or vertices. (2.G.1)
- Partition shapes into halves and fourths. (2.G.3)

Proficient

A student performing at the **Proficient Level** demonstrates an appropriate command of Ohio's Learning Standards for Grade 2 Mathematics. A student at this level has a **consistent ability** to solve problems involving addition and subtraction within 100, understands place value to 1,000, measures and compares lengths, and reasons about shapes and their attributes.

A student whose performance falls within the **Proficient Level** typically can:

- Solve most routine and straightforward problems accurately.
- Compute accurately with most grade-level numbers and operations.
- Apply most grade-level mathematical concepts, terms, and properties.
- Use informal (visual representation and language) and some formal reasoning.

A student at the **Proficient Level** can:

- Solve word problems using addition and subtraction within 100 (see Table 1 of the Ohio Learning Standards). (2.OA.1)
- Fluently adds and subtracts within 20 using mental strategies. (2.OA.2)
- Identify a group of up to 20 objects as having an even or odd number value by pairing together or counting the objects. (2.OA.3)
- Write an equation to express an even number within 20 as a sum of two equal addends. (2.OA.3)
- Use repeated addition to find the total of equal groups of up to 5 objects. (2.OA.4)
- Use models to represent repeated addition and write equations. (2.OA.4)
- Identify hundreds, tens, and ones in three-digit numbers using models. (2.NBT.1)
- Demonstrate understanding of 100 as ten groups of ten. (2.NBT.1)
- Model multiples of 100 up to 900 as corresponding bundles of 100 using objects and pictures. (2.NBT.1)
- Count within 1,000 by ones, tens, and hundreds. (2.NBT.2)
- Read, write, and represent numbers to 1,000 in multiple forms. (2.NBT.3)
- Compare three-digit numbers using place value understanding. (2.NBT.4)
- Add and subtract within 100 using place value strategies, properties of operations, and models. (2.NBT.5-8)
- Explain why strategies work using place value and properties. (2.NBT.9)
- Measures and compares lengths using standard tools. (2.MD.1–2)
- Estimates and measures lengths using standard units. (2.MD.3)
- Solve word problems involving length using drawings and equations 100 (see Table 1 of the Ohio Learning Standards). (2.MD.5)
- Represent sums and differences using models. (2.MD.6)
- Tell and write time to the nearest 5 minutes using a.m. and p.m. (2.MD.7)
- Solve money problems within 100 using coins and symbols 100 (see Table 1 of the Ohio Learning Standards). (2.MD.8)
- Find the total value of a small collection of coins with regrouping using objects and pictures. (2.MD.8)
- Generate measurement data by measuring lengths of objects to the nearest whole unit or by making repeated measurements of the same object. (2.MD.9)

- Create a line plot of measurement data, where the horizontal scale is marked off in whole-number units. (2.MD.9)
- Create and interpret bar graphs and picture graphs. (2.MD.10)
- Recognize and name shapes based on attributes. (2.G.1)
- Partition a rectangle into rows and columns of same-size squares. (2.G.2)
- Partition circles and rectangles into two, three, or four equal shares. (2.G.3)
- Describe partitioned shares of shapes using the words halves, thirds, or fourths and quarters, and use the phrases half of, third of, or fourth of and quarter of. (2.G.3)
- Describe a whole as two halves, three thirds, or four fourths in real-world contexts. (2.G.3)

Accomplished

A student performing at the **Accomplished Level** demonstrates a strong command of Ohio's Learning Standards for Grade 2 Mathematics. A student at this level has a **superior ability** to solve two-step problems, explain reasoning using mathematical language, and apply concepts to real-world contexts with accuracy and efficiency.

Students whose performance falls within the **Accomplished Level** typically can:

- Accurately solve routine and straightforward problems.
- Solve a variety of routine problems.
- Compute accurately and efficiently with familiar numbers.
- Recognize connections between mathematical concepts, terms, and properties.
- Use informal and some formal reasoning with symbolic representation.

A student at the **Accomplished Level** can:

- Solve non-routine word problems involving addition and subtraction within 100 (see Table 1 of the Ohio Learning Standards). (2.OA.1)
- Justify strategies for fluency within 20 using properties of operations. (2.OA.2)
- Explain why a number is even or odd using models and equations. (2.OA.3)
- Use models to explain repeated addition and write equations. (2.OA.4)
- Identify and explain hundreds, tens, and ones in three-digit numbers with models. (2.NBT.1)
- Explains multiples of 100 up to 900 as corresponding bundles of 100. (2.NBT. 1)
- Count forward and backward by 10s, and 100s from any number. (2.NBT.2)
- Count by 5's starting at any multiple of 5. (2.NBT.2)
- Write numbers to 1,000 in standard and expanded form. (2.NBT.3)
- Compare and order three-digit numbers using appropriate symbols and explain reasoning. (2.NBT.4)
- Add and subtract within 1,000 using and explaining efficient strategies. (2.NBT.5-9)
- Add up to four two-digit numbers using strategies based on place value and properties of operations. (2.NBT.6)
- Add and subtract within 1,000, using more than one of the following: concrete models, drawings, and symbols using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. (2.NBT.6-7)
- Mentally add 10 or 100 to a given number 100-900 and mentally subtract 10 or 100 from a given number 100-900. (2.NBT.8)
- Measure and compare lengths using appropriate tools and units. (2.MD.1–2)
- Estimate and justify length measurements. (2.MD.3)
- Solve word problems involving length and explain strategies using objects, pictures, and numbers. (2.MD.5)
- Represent and solve problems using models. (2.MD.6)
- Solve money problems within 100 using coins (i.e., quarters, dimes, nickels, and pennies) and bills (i.e., $1, $5, and $10). (2.MD.8)
- Solve word problems by adding and subtracting within 100, dollars with dollars and cents with cents (not using dollars and cents simultaneously) using the $ and ¢ symbols appropriately (excludes decimal notation). (2.MD.8)

- Analyze data in graphs to answer comparison questions. (2.MD.10)
- Partition a rectangle into rows and columns of the same-size squares and count to find the total number of parts. (2.G.2)
- Partition shapes into equal shares and use correct vocabulary. (2.G.3)
- Recognize that equal shares of identical wholes need not have the same shape. (2.G.3)

Advanced

A student performing at the **Advanced Level** demonstrates a distinguished command of Ohio's Learning Standards for Grade 2 Mathematics. A student at this level has a **sophisticated ability** to solve non-routine problems, justifies reasoning with precision, and uses multiple strategies and representations to model and solve mathematical situations.

A student whose performance falls within the **Advanced Level** typically can:

- Solve routine and straightforward problems accurately and efficiently.
- Solve a variety of non-routine problems.
- Compute accurately and efficiently.
- Recognize, apply, and justify mathematical concepts, terms, and properties and their connections, and use more formal reasoning and symbolic representation (precise mathematical language).
- Justifies strategies using multiple representations.
- Explain and defend strategies using mathematical language.

A student at the **Advanced Level** can:

- Solve non-routine problems involving unknowns in all positions (see Table 1 of the Ohio Learning Standards). (2.OA.1)
- Explain and model even/odd patterns using equations and visuals. (2.OA.3)
- Create and solve real-world problems using strategies, models, and equations. (2.OA.4)
- Count within 1,000 by flexible intervals and explain patterns. (2.NBT.2)
- Represent numbers in multiple forms and explain equivalence. (2.NBT.3)
- Compare and order numbers within 1,000 using place value. (2.NBT.4)
- Add and subtract within 1,000, using multiple strategies and justify choices. (2.NBT.5–7)
- Measure and compare lengths using different units and explain the differences. (2.MD.2)
- Use standard units to measure the length of two objects to determine the difference in length, and explain the process used. (2.MD.4)
- Use models to represent and explain thinking when solving problems involving length. (2.MD.6)
- Solve non-routine money problems within 100 and explain coin combinations.(2.MD.8)
- Analyze and interpret data to make predictions. (2.MD.10)
- Justify reasoning about shape attributes. (2.G.1)
- Partition shapes into equal shares and explain reasoning. (2.G.2-3)