

Grade Level Expectations in Mathematics

When entering first grade this is what is expected that your child should already know.

1. Count to 100 by 1's or 10's.
2. Count forward beginning from a given number within the known sequence (instead of having to begin at 1).
3. Write numbers from 0 to 20.
4. 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.
5. Given a number from 1–20, count out that many objects.
6. Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group.
7. Can use the phrase "more than", "same as", and "less than" when comparing 2 numbers from 1-10.
8. **Fluently** add and subtract within 5.
9. For any number from 1 to 9, find the number that makes 10 when added to the given number.
10. Compose and decompose numbers from 11 to 19 into ten ones and some further ones. Example: $18 = 10 + 8$.
11. Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference. For example, directly compare the heights of two children and describe one child as taller/shorter.
12. Classify objects into given categories; count the number of objects in each category and sort the categories by count.
13. Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to.
14. Correctly name shapes regardless of their orientations or overall size.
15. Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid").

Grade Level Expectations in Mathematics

When entering second grade this is what is expected that your child should already know.

1. Read and write the numbers up to 120 by 1's, 2's, 5's, and 10's. Also by starting with various numbers.
2. Comparing numbers up to 120 using such phrases as "same as", "more than", "greater than", "fewer than". Example: 70 is one more than ___ (69). Also can put a set of numbers from least/smallest to greatest/largest.
3. Understand that the two digits of a two-digit number represent amounts of tens and ones.
4. Can state one more than, one less than, 10 more than, 10 less than, for any number given (up to 100).
5. Count backwards from any number between 0 and 100.
6. List addition facts for 2 through 10. Example: $8 = 2 + 6 = 3 + 5 = 4 + 4$.
7. Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10.
8. Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20.
9. Understanding the reverse relationship between adding and subtracting. Example: If $8 + 3 = 11$ then $11 - 3 = 8$ and $11 - 8 = 3$.
10. Knows answer to addition facts up to $10 + 10$ and can state the answer within 2-4 seconds.
11. Knows all subtraction facts up to $10 - 9$ and can state the answer within 2-4 seconds.
12. Can solve problems like $___ + 2 = 7$ and $10 - ___ = 6$.
13. Order three objects by length; compare the lengths of two objects indirectly by using a third object.
14. Tell and write time in hours and half hours using analog and digital clocks.
15. 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.
16. Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.
17. Partition circles and rectangles into two and four equal shares, describe the shares using the words halves, fourths, and quarters, and use the phrases half of, fourth of, and quarter of. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.

Grade Level Expectations in Mathematics

When entering third grade this is what is expected that your child should already know.

1. Count, read, and write numbers up to 1000 in words and numerals, by 1's, 10's, and 100's.
2. Can order numbers from largest to smallest or smallest to largest up to 1000.
3. Can count by 3's up to 36 and by 4's up to 48
4. Can count by 2's, 5's, and 10's starting at any number. Example: starting with 35 and count by 5's.
5. **Fluently** adding and subtracting 2 numbers through 99.
6. **Fluently** add and subtract within 20 using mental strategies.
7. Find distance between numbers on a number line. Example: How far is 79 from 26?
8. Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones. Example: 706 = 7 hundreds, 0 tens, and 6 ones.
9. Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using $>$, $=$, and $<$ symbols to record the results of comparisons.
10. Understand multiplication as repeated addition or counting the total number of objects. Example: $3 \times 5 = 5 + 5 + 5 = 15$, 3×5 is 3 groups of 5 objects
11. Multiplying numbers up to 5×5 .
12. Understanding division as another way of expressing multiplication using fact families. Example: $2 \times 3 = 6$ can be rewritten as $6 \div 2 = 3$ or $6 \div 3 = 2$
13. Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.
14. Estimate lengths using units of inches, feet, centimeters, and meters.
15. Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.
16. Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units.
17. Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.
18. Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using \$ and ¢ symbols appropriately. Example: If you have 2 dimes and 3 pennies, how many cents do you have?
19. Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph.
20. Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.
21. Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.

Grade Level Expectations in Mathematics

When entering fourth grade this is what is expected that your child should already know.

1. Can count orally by 6's to 72, 7's to 84, 8's to 96 and 9's to 108. From previous years they should already know how to count by 2's, 3's, 4's, 5's and 10's.
2. Know even numbers end in 0, 2, 4, 6, 8 and odd numbers end in 1, 3, 5, 7, or 9.
3. Add and subtract **fluently** two numbers with regular regrouping through 999.
4. Can estimate the sum or difference of two numbers with 3 digits (rounding the numbers then adding or subtracting them.)
5. Know multiplication facts through 10 x 10 **fluently**.
6. Understand multiplication and division fact families and the inverse relationship of these two operations. Example: $3 \times 8 = 24$, then $24 \div 8 = 3$ and $24 \div 3 = 8$.
7. Can solve $7 \times \underline{\quad} = 42$ or $12 \div \underline{\quad} = 4$ using the above inverse relationship between multiplication and division.
8. Mentally calculate a product up to a three-digit number (even hundreds) by a one digit number. Example: 500×3 ($5 \times 3 = 15$ then add 2 zeros at the end for 1500).
9. Understand basic fractions and the terms numerator and denominator.
10. Recognize name and use equivalent fractions with denominators 2, 3, 4, 6 and 8. Can use fraction strips.
11. Express whole numbers as fractions and recognize fractions that are equivalent to whole numbers. Examples: Express 3 in the form $3 = \frac{3}{1}$; recognize that $\frac{6}{1} = 6$; locate $\frac{4}{4}$ and 1 at the same point of a number line diagram
12. Use common units of measurements in length, weight, and time and solve problems using time, liquid volume, and mass. Example: 12 inches=1 foot; 3 feet=1 yard; 16 ounces=1 pound; 60 minutes=1 hour; 24 hours=1 day; 12 months=1 year.
13. 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.
14. Know that meters and centimeters are measurements like feet and inches; kilograms and grams are weight like pounds; liters and milliliters are like ounces (capacity of liquid).
15. Able to read and measure using a ruler to $\frac{1}{2}$ and $\frac{1}{4}$.
16. Can calculate the perimeter of a square or rectangle.
17. Understand that area of a square or rectangle is the space in the middle (length x width).
18. 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.
19. Read and interpret bar graphs.
20. Knows maximum, minimum and range of a set of values.

Grade Level Expectations in Mathematics

When entering fifth grade this is what is expected that your child should already know.

1. Read and write numbers to 1,000,000.
2. Know place value to 1,000,000. Example: 25,068 is 2 ten thousand, 5 thousand, 0 hundreds, 6 tens and 8 ones.
3. Use place value understanding to round multi-digit whole numbers to any place.
4. List the first twelve multiples of a given one-digit whole number
5. Add, subtract and multiply whole numbers **fluently**.
6. Divide numbers up to four-digits by one-digit numbers and by 10.
7. Use the relationship between multiplication and division to check results and to find the value of the unknowns in equations. Example $x \div 10 = 25$, $10 \times 25 = 250$ so $x = 250$
8. Solve multi-step word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted.
9. Locate the decimals in tenths and hundredths on a number line.
10. Read, write, interpret, and compare decimals up to two decimal places (hundredths).
11. Convert decimals in tenths and hundredths to fraction and decimal forms.
12. Write improper fractions as mixed numbers; and mixed numbers as improper fractions.
13. Compare and order up to three fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12, and 100.
14. Compare two fractions with different numerators and different denominators
15. Add and subtract fractions with the same denominator.
16. Add and subtract mixed numbers with the same denominator.
17. Find the value of an unknown in equations such as $1/8 + x = 5/8$ or $3/4 - y = 1/2$.
18. Measure area and perimeter for compound shapes (complex figures).
19. Make a line plot to display a data set of measurements in fractions of a unit ($1/2$, $1/4$, $1/8$).
20. Calculate conversions from one unit to a larger or smaller unit of measure: meters to centimeters, kilograms to grams, liters to milliliters, hours to minutes, minutes to seconds, years to months, weeks to days, feet to inches, ounces to pounds.
21. Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.
22. Find the side of a square or rectangle given its perimeter or area and possibly one side.
23. Identify basic geometric shapes including right triangles.
24. Recognize plane figures that have line of symmetry.
25. Measure and sketch angles with protractors.
26. Find unknown angles by adding and/or subtracting.