

Mathematics EOG Achievement Level Descriptors—Grade 3

Note: To minimize redundancy, the achievement level descriptors at each level do not repeat competencies that are described for a lower achievement level. The students at the higher level can be assumed to have mastered the competencies described for the lower achievement levels.

Achievement Level I

Students performing at this level do not have sufficient mastery of knowledge and skills in this subject area to be successful at the next grade level.

Students performing at Level I show minimal understanding and computational accuracy. The students often respond with inappropriate answers or procedures. They rarely use problem-solving strategies.

Level I students demonstrate a lack of development of number sense for whole numbers through 9,999 and a lack of evidence of ability to perform multi-digit addition and subtraction. They can rarely show knowledge of multiplication facts. Students inconsistently compare, order, and represent rational numbers (halves, fourths, and eighths; thirds and sixths) concretely and symbolically. They rarely use appropriate vocabulary to compare, describe, and classify two- and three-dimensional shapes. Students are not able to correctly measure length, capacity, weight, time, and temperature (Fahrenheit and Celsius). They can sometimes identify and extend simple numeric or geometric patterns. Students show minimal understanding of organizing and displaying data using a variety of graphs. They are rarely able to identify points on rectangular coordinate system. Students seldom correctly use symbols to represent unknown quantities in number sentences and to solve simple equations. They rarely solve problems using a variety of strategies.

Achievement Level II

Students performing at this level demonstrate inconsistent mastery of knowledge and skills in this subject area and are minimally prepared to be successful at the next grade level.

Students performing at Level II typically show some evidence of understanding and computational accuracy. The students sometimes respond with appropriate answers or procedures. They demonstrate limited use of problem-solving strategies.

Level II students show some evidence of number sense for whole numbers through 9,999 and some evidence of multi-digit subtraction. They inconsistently apply multiplication facts in single-digit multiplication and division. Using fractions, they often incorrectly compare, order, and occasionally misrepresent (halves, fourths, thirds, sixths, and eighths). Students sometimes use appropriate vocabulary to compare, describe, and classify two- and three-dimensional shapes. They are inconsistent in measurement of length, capacity, weight, time, and temperature (Fahrenheit and Celsius). Students show limited understanding of the concept of probability. They are inconsistent when they identify and extend numeric and geometric patterns. Students are sometimes successful at organizing and displaying data using a variety of graphs. They sometimes correctly identify points on the rectangular coordinate system. Students occasionally correctly solve problems where symbols are used to represent unknown quantities in number sentences and to solve simple equations. They sometimes solve problems using a limited variety of strategies.

Achievement Level III

Students performing at this level consistently demonstrate mastery of grade level subject matter and skills and are well prepared for the next grade level.

Students performing at Level III generally show understanding, compute accurately. The students consistently respond with appropriate answers or procedures. They use a variety of problem-solving strategies.

Level III students demonstrate number sense for whole numbers through 9,999 and show consistent evidence of ability with multi-digit subtraction. They know multiplication facts and are fluent with single-digit multiplication and division. They regularly are successful at comparing, ordering and representing rational numbers (halves, fourths, thirds, sixths, and eighths). Students consistently use appropriate vocabulary to compare, describe, and classify two- and three-dimensional shapes. They frequently measure length, capacity, weight, time, and temperature accurately (Fahrenheit and Celsius). Almost always, students identify and extend numeric or geometric patterns correctly. They correctly organize and display data using a variety of graphs. Students appropriately use the rectangular coordinate system to graph and identify points. They understand and use simple probability concepts.

Achievement Level IV

Students performing at this level consistently perform in a superior manner clearly beyond that required to be proficient at grade level work.

Students performing at Level IV commonly show a high level of understanding, compute accurately. The students are very consistent responding with appropriate answers or procedures. They demonstrate flexibility by using a variety of problem-solving strategies.

Level IV students demonstrate a high level of success with regard to number sense for whole numbers through 9,999. They show mastery of multi-digit subtraction and apply multiplication facts fluently with single-digit multiplication and division. They consistently correctly compare, order, and represent rational numbers (halves, fourths, third, sixths, and eighths). Students consistently use appropriate vocabulary to compare, describe, and classify two- and three- dimensional shapes. They accurately measure length, capacity, weight, time, and temperature (Fahrenheit and Celsius). Students successfully identify and extend complex numeric or geometric patterns. They successfully organize, display, and interpret data using a variety of graphs. Students use the rectangular coordinate system to graph, identify, and mentally manipulate points. They accurately apply simple probability concepts. Students correctly use symbols to represent unknown quantities in number sentences and to solve equations. They solve high level thinking problems using a wide variety of strategies.

Students generally are able to use symbols to represent unknown quantities in number sentences and to solve simple equations successfully. They can solve problems using a variety of strategies.

HSP-C-018 May 3, 2007

Mathematics EOG Achievement Level Descriptors–Grade 4

Note: To minimize redundancy, the achievement level descriptors at each level do not repeat competencies that are described for a lower achievement level. The students at the higher level can be assumed to have mastered the competencies described for the lower achievement levels.

Achievement Level I

Students performing at this level do not have sufficient mastery of knowledge and skills in this subject area to be successful at the next grade level.

Students performing at Level I show minimal understanding and computational accuracy. The students often respond with inappropriate answers or procedures. They rarely use problem-solving strategies.

Level I students rarely show number sense by comparing, ordering, estimating, and representing numbers from 0.01 to 99,999. Students are rarely able to multiply and divide multi-digit numbers or use strategies for estimation of products and quotients in appropriate situations. Students are not able to add and subtract fractions with like denominators. They seldom solve problems involving the perimeter of plane figures and the area of rectangles. Students cannot make appropriate use of the coordinate plane to describe location and relative position of points. They seldom describe lines accurately as parallel or perpendicular. Students are rarely successful at collecting, organizing, analyzing, and displaying data using a variety of graphs. They are unable to use range, median, and mode to describe a set of data. Students can rarely design simple experiments to investigate and describe the probability of events. Students are unable to use the order of operations or the identity, commutative, associative, and distributive properties.

Achievement Level II

Students performing at this level demonstrate inconsistent mastery of knowledge and skills in this subject area and are minimally prepared to be successful at the next grade level.

Students performing at Level II typically show some evidence of understanding and computational accuracy. The students sometimes respond with appropriate answers or procedures. They demonstrate limited use of problem-solving strategies.

Level II students sometimes show number sense by comparing, ordering, estimating, and representing numbers from 0.01 to 99,999. They inconsistently multiply and divide multi-digit numbers. Students sometimes use strategies including estimation of products and quotients in appropriate situations. They are inconsistent in addition and subtraction of fractions with like denominators. Students sometimes solve problems involving perimeter of plane figures and the area of rectangles. Students sometimes correctly use the coordinate plane to describe the location and relative position of points. They inconsistently describe lines correctly as parallel or perpendicular. Students have difficulty collecting, organizing, analyzing, and displaying data using a variety of graphs. They are inconsistent in their ability to use range, median, and mode to describe a set of data. Students sometimes successfully design and use simple experiments to investigate and describe the probability of events. Students inconsistently use the order of operations or the identity, commutative, associative, and distributive properties.

Achievement Level III

Students performing at this level consistently demonstrate mastery of grade level subject matter and skills and are well prepared for the next grade level.

Students performing at Level III generally show understanding and computational accuracy. The students consistently respond with appropriate answers or procedures. They use a variety of problem-solving strategies.

Level III students frequently show number sense by comparing, ordering, estimating, and representing numbers from 0.01 to 99,999. They are usually consistent when multiplying and dividing multi-digit numbers; they use strategies including estimation of products and quotients in appropriate situations. They also add and subtract numbers with like denominators. Students solve problems involving perimeter of plane figures and area of rectangles. Students use coordinate planes to describe the location and relative position of points. They describe lines correctly as parallel or perpendicular. Students collect, organize, analyze, and display data using a variety of graphs. They use range, median, and mode to describe a set of data. Students design and use simple experiments to investigate and describe the probability of events. Students generally can use the order of operations or the identity, commutative, associative, and distributive properties.

Achievement Level IV

Students performing at this level consistently perform in a superior manner clearly beyond that required to be proficient at grade level work.

Students performing at Level IV commonly show a high level of understanding and computational accuracy. The students are very consistent responding with appropriate answers or procedures. They demonstrate flexibility by using a variety of problem-solving strategies.

Level IV students successfully show number sense by comparing, ordering, estimating, and representing numbers from 0.01 to 99,999. They display fluency with multiplication and division of multi-digit numbers. Students effectively use strategies including estimation of products and quotients in appropriate situations. They exhibit mastery of addition and subtraction of fractions with like denominators and decimals through hundredths. Students consistently solve problems involving the perimeter of plane figures and area of rectangles. They show a thorough understanding and application of the coordinate plane when describing location and relative position of a point. Students consistently describe lines correctly as parallel or perpendicular. They successfully collect, organize, and display data using a variety of graphs. Students accurately use range, median, and mode to describe a set of data. They effectively design and use simple experiments to investigate and describe the probability of events. Students successfully use the order of operations or the identity, commutative, associative, and distributive properties.

HSP-C-018 May 3, 2007

Mathematics EOG Achievement Level Descriptors—Grade 5

Note: To minimize redundancy, the achievement level descriptors at each level do not repeat competencies that are described for a lower achievement level. The students at the higher level can be assumed to have mastered the competencies described for the lower achievement levels.

Achievement Level I

Students performing at this level do not have sufficient mastery of knowledge and skills in this subject area to be successful at the next grade level.

Students performing at Level I usually show minimal understanding and computational accuracy and often respond with inappropriate answers or procedures. They rarely use problem-solving strategies.

Students rarely demonstrate number sense for rational numbers 0.001 through 999,999. They rarely demonstrate ability in the addition, subtraction, comparison, and ordering of fractions and decimals. They seldom can estimate the measure of an object in one system given the measure of that object in another system. They rarely identify, estimate, and measure the angles of plane figures and rarely identify angle relationships. Students rarely identify, define, and describe the properties of plane figures, including parallel lines, perpendicular lines, and lengths of sides and diagonals. Students are seldom able to identify, generalize, and extend numeric and geometric patterns. In solving problems, fifth-graders at Level I rarely organize, analyze, and display data using a variety of graphs. They rarely are able to use range, median, and mode to describe multiple sets of data. Students rarely use algebraic expressions to solve one-step equations and inequalities. They rarely identify, describe, and analyze situations with constant or varying rates of change.

Achievement Level II

Students performing at this level demonstrate inconsistent mastery of knowledge and skills in this subject area and are minimally prepared to be successful at the next grade level.

Students performing at Level II typically show some evidence understanding and computational accuracy and sometimes respond with appropriate answers or procedures. They demonstrate limited use of problem-solving strategies.

Students demonstrate inconsistent number sense for rational numbers 0.001 through 999,999. They demonstrate limited ability in the addition, subtraction, comparison, and ordering of fractions and decimals. They inconsistently estimate the measure of an object in one system given the measure of that object in another system. They sometimes correctly identify, estimate, and measure the angles of plane figures and sometimes correctly identify angle relationships. Students inconsistently identify, define, and describe the properties of plane figures, including parallel lines, perpendicular lines, and lengths of sides and diagonals. Students are sometimes able to identify, generalize, and extend numeric and geometric patterns. In problem solving, fifth-graders at Level II inconsistently organize, analyze, and display data using a variety of graphs. They have inconsistent success using range, median, and mode to describe multiple sets of data. Students sometimes are able to use algebraic expressions to solve one-step equations and inequalities. They inconsistently identify, describe, and analyze situations with constant or varying rates of change.

Achievement Level III

Students performing at this level consistently demonstrate mastery of grade level subject matter and skills and are well prepared for the next grade level.

Students performing at Level III generally show understanding, compute accurately, and respond with appropriate answers or procedures. They use a variety of problem-solving strategies.

Students generally demonstrate number sense for rational numbers 0.001 through 999,999. They generally demonstrate ability in the addition, subtraction, comparison, and ordering of fractions and decimals. They usually make correct estimates of the measure of an object in one system given the measure of that object in another system. Students generally identify, estimate, and measure the angles of plane figures and generally identify angle relationships. They generally identify, define, and describe the properties of plane figures, including parallel lines, perpendicular lines, and lengths of sides and diagonals. Students are usually able to identify, generalize, and extend numeric and geometric patterns. To solve problems, fifth-graders at Level III generally are able to organize, analyze, and display data using a variety of graphs. They generally use range, median, and mode to describe multiple sets of data. Students generally use algebraic expressions to solve one-step equations and inequalities. They generally identify, describe, and analyze situations with constant or varying rates of change.

Achievement Level IV

Students performing at this level consistently perform in a superior manner clearly beyond that required to be proficient at grade level work.

Students performing at Level IV commonly show a high level of understanding, compute accurately, and respond consistently with appropriate answers or procedures. They demonstrate flexibility by using a variety of problem-solving strategies.

Students consistently demonstrate number sense for rational numbers 0.001 through 999,999. They consistently demonstrate ability in the addition, subtraction, comparison, and ordering of fractions, mixed numbers, and decimals. They correctly estimate the measure of an object in one system given the measure of that object in another system. Students commonly identify, estimate, and measure the angles of plane figures and commonly identify angle relationships. They consistently identify, define, and describe the properties of plane figures, including parallel lines, perpendicular lines, and lengths of sides and diagonals. Students are commonly able to identify, generalize, and extend numeric and geometric patterns. To solve problems, fifth-graders at Level IV consistently organize, analyze, and display data using a variety of graphs. They consistently use range, median, and mode to describe multiple sets of data. Students commonly use algebraic expressions to solve one-step equations and inequalities. They commonly identify, describe, and analyze situations with constant or varying rates of change.

HSP-C-018 May 3, 2007