Michigan Alternative Content Standards - Mathematics

Grade 5

Students demonstrate increasingly complex understanding of number sense.

Number and Operations in Base 10

1 Compare numbers up to 99 using base-ten models. EE.5.NBT.1

- H The student can compare two quantities up to 99 using base-ten models. EE.5.NBT.H.1
- M The student can compare two quantities (0-20) using models. EE.5.NBT.M.1
- L The student can compare two quantities of objects (0-10) with extreme differences to determine which set has more. EE.5.NBT.L.1

2 Use the number of zeros in numbers that are powers of 10 to determine which values are equal, greater than, or less than. EE.5.NBT.2

- H The student can order numbers that are multiples of ten ranging from 0 to 10,000 in sequential order least to greatest. EE.5.NBT.H.2
- M The student can order multiples of ten ranging from 0-50 in sequential order least to greatest. EE.5.NBT.M.2
- L The student can identify the sequential order of numbers up to 10. EE.5.NBT.L.2

3 Compare whole numbers up to 100 using symbols (<, >, =). EE.5.NBT.3

- H The student can compare whole numbers up to 100 using symbols (=, <, >). EE.5.NBT.H.3
- M The student can identify which numerals (0-10) are “greater than”, “more than”, “less than” or “fewer than” a target numeral. EE.5.NBT.M.3
- L The student can identify which numeral, paired with a visual representation of its quantity, is greater than another numeral paired with a visual representation of its quantity (numerals 1-10). EE.5.NBT.L.3

4 Round two-digit whole numbers to the nearest 10 from 0—90. EE.5.NBT.4

- H The student can round two-digit whole numbers (0-90) to the nearest ten using a number line indicating the tens. EE.5.NBT.H.4
- M The student can round whole numbers (0-20) to the nearest ten using a number line. EE.5.NBT.M.4
- L The student can determine if a single-digit number is closer to 0 or 10 on a number line. EE.5.NBT.L.4

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5 Multiply numbers up to 5 x 5. EE.5.NBT.H.5

H The student can multiply numbers up to 5 x 5. EE.5.NBT.H.5

M The student can use visual models or objects to depict repeated addition related to a multiplication problem using single digits to 3. EE.5.NBT.M.5

L The student can combine two sets with an equal number of objects in each set. EE.5.NBT.L.5

6-7 Illustrate the concept of division using fair and equal shares. EE.5.NBT.6-7

H The student can partition a set into equal subsets to solve a problem. EE.5.NBT.H.6-7

M The student can divide objects into two equal sets. EE.5.NBT.M.6-7

L The student can replicate or identify an equal set from a model.

Number and Operations - Fractions

1 Identify models of halves (1/2, 2/2) and fourths (1/4, 2/4, 3/4, 4/4). EE.5.NF.1

H The student can differentiate between halves (1/2, 2/2) and fourths (1/4, 2/4, 3/4, 4/4). EE.5.NF.H.1

M The student can identify one-half and one-fourth in a model. EE.5.NF.M.1

L The student can differentiate between a whole and one-half. EE.5.NF.L.1

2 Identify models of thirds (1/3. 2/3, 3/3) and tenths (1/10, 2/10, 3/10, 4/10, 5/10, 6/10, 7/10, 8/10, 9/10, 10/10). EE.5.NF.2

H The student can recognize thirds (1/3, 2/3, 3/3) and tenths (1/10, 2/10, 3/10, 4/10, 5/10, 6/10, 7/10, 8/10, 9/10, 10/10) on a model. EE.5.NF.H.2

M The student can identify the unit fractions 1/3 and 1/10 when provided with models. EE.5.NF.M.2

L The student can identify how many equal parts a shape or object are separated into, limited to 1 and 3. EE.5.NF.L.2

Students demonstrate increasingly complex spatial reasoning and understanding of geometric principles.

Geometry

1-4 Sort two-dimensional figures and identify the attributes (angles, number of sides, corners, color) they have in common. EE.5.G.1-4

H The student can sort two-dimensional figures using attributes (e.g., angles, numbers of sides) they have in common. EE.5.G.H.1-4

M The student can identify two-dimensional figures with a common attribute. EE.5.G.M.1-4

L The student can identify two-dimensional shapes (circle, square, star). EE.5.G.L.1-4

Measurement and Data

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3 Identify common three-dimensional shapes. EE.5.MD.3

- H The student can identify a sphere, cube, cone, and cylinder. EE.5.MD.H.3
- M The student can match objects to their outlines. EE.5.MD.M.3
- L The student can differentiate between round and square or sphere and cube. EE.5.MD.L.3

4-5 Determine the volume of a rectangular prism by counting units of measure (unit cubes). EE.5.MD.4-5

- H The student can determine the volume of a rectangular prism by counting unit cubes. EE.5.MD.H.4-5
- M The student can demonstrate understanding that 3D shapes have volume. EE.5.MD.M.4-5
- L The student can differentiate between empty and full. EE.5.MD.L.4-5

Students demonstrate increasingly complex understanding of measurement, data and analytic procedures.

Using Measurement and Data

1.a Tell time using an analog or digital clock to the half or quarter hour. EE.5.MD.1.A

- H The student can tell time to the quarter hour using a digital clock or to the half hour using an analog clock. EE.5.MD.H.1.A
- M The student can tell time to the hour using a digital clock or analog clock. EE.5.MD.M.1.A
- L The student can associate activities with morning and afternoon. EE.5.MD.L.1.A

1.b Use standard units to measure weight and length of objects. EE.5.MD.1.B

- H The student can use an appropriate tool and customary units of measurement to measure length (inches/feet) and weight of objects (ounces/pounds). EE.5.MD.H.1.B
- M The student can identify the appropriate tool for measuring length and weight. EE.5.MD.M.1.B
- L The student can compare the lengths or masses of two objects to determine which one is longer or heavier, where the difference is vastly different. EE.5.MD.L.1.B

1.c Indicate relative value of collections of coins. EE.5.MD.1.C

- H The student can tell the amount of money using collections of coins up to and including $10.00. EE.5.MD.H.1.C
- M The student can identify an equivalent value of a nickel, dime, and quarter. EE.5.MD.M.1.C
- L The student can match coins of the same denomination (penny, nickel, dime, and quarter) when presented within a group. EE.5.MD.L.1.C

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2 Represent and interpret data on a picture, line plot, or bar graph. EE.5.MD.2

H The student can read and interpret data from charts, tables, graphs, tallies and pictographs. EE.5.MD.H.2

M The student can identify what type or quantity of data are needed to answer a question, solve a problem, or complete a chart or pictograph. EE.5.MD.M.2

L The student can identify the category in a bar graph or picture graph that has the most or least when the quantities have extreme differences. EE.5.MD.L.2

Students solve increasingly complex mathematical problems, making productive use of algebra and functions.

Problem Solving

3 Identify and extend numerical patterns. EE.5.OA.3

H The student can create, describe and extend simple number patterns that involve a simple addition or subtraction rule. EE.5.OA.H.3

M The student can extend a simple ABAB, ABC or ABBA pattern involving shapes, numbers or objects. EE.5.OA.M.3

L The student can extend a simple AB pattern using pictures, objects or familiar symbols. EE.5.OA.L.3