

Grade

4

meapTM
Michigan Educational Assessment Program

Item Descriptors

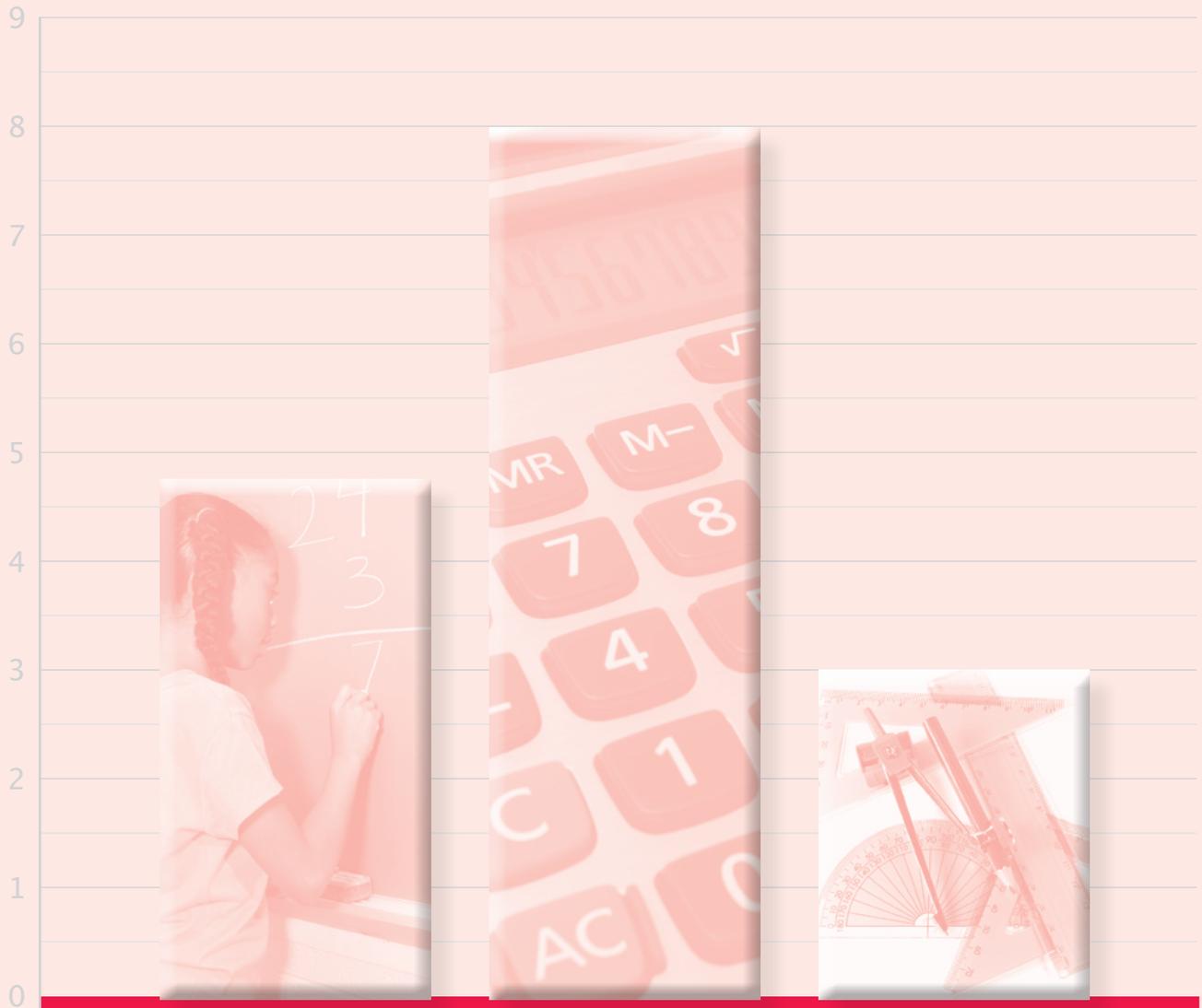
4th

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MATHEMATICS
FALL 2010

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NOTE: For each item listed throughout this booklet, the first statement is a summary of the Michigan Grade Level Content Expectation (GLCE) and the second statement is the descriptor for the item's stem or question.

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Students were instructed to read the directions below silently as the test administrator read them aloud.

PART 1

DIRECTIONS:

In this part, you will answer multiple-choice mathematics questions. Some questions will ask you to view a picture, chart, or other mathematics-related information. Use that information with what you know to answer the question. You may **NOT** use a calculator for this part of the test.

You must mark all of your answers in Part 1 of your **Answer Document** with a No. 2 pencil. You may underline, highlight, or write in this test booklet to help you, but nothing in this test booklet will be scored. No additional paper may be used.

Mark only one answer for each question. Completely fill in the corresponding circle on your **Answer Document**. If you erase an answer, be sure to erase completely. Remember that if you skip a question in the test booklet, you need to skip the answer space for that question on the **Answer Document**. If you are not sure of an answer, mark your **best** choice.

A sample question is provided for you below.

Sample Multiple-Choice Question:

Marty wants to put 75 CDs into cases. Each case holds exactly 8 CDs. What is the **least** number of cases that Marty will need to hold all his CDs?

- A 8
- B 9
- C 10
- D 11

For this sample question, the correct answer is **C**. Circle **C** is filled in for the sample question on your **Answer Document**.

Once you have reached the word **STOP** in your test booklet, do **NOT** go on to the next page. If you finish early, you may go back and check your work in Part 1 of the test **ONLY**. Check to make sure that you have answered every question. Do **NOT** look at any other part of the test.

NOTE: The directions for Part 2 are the same as the above instructions, but with calculators allowed.

- 1 N.ME.03.16:** Understand the meaning and terminology of fractions.

Given a fraction strip, determine the fractional shaded portion.

- A** ratio of non-shaded portion to shaded portion
- B** ratio of shaded portion to non-shaded portion
- C** non-shaded area
- D** correct

- 2 N.ME.03.16:** Understand the meaning and terminology of fractions.

Identify the fraction with the given denominator.

- A** numerator
- B** neither denominator nor numerator
- C** correct
- D** neither denominator nor numerator, quotient

- 3 N.ME.03.17:** Recognize, name, and use equivalent fractions.

Given a fraction strip, identify the fraction strip that represents the equivalent fraction.

- A** complement of given fraction model
- B** nonequivalent fraction model
- C** nonequivalent fraction model
- D** correct

- 4 N.ME.03.17:** Recognize, name, and use equivalent fractions.

Identify the shaded portion of the fraction strip.

- A** complement
- B** incorrect fraction
- C** ratio of non-shaded to shaded portion
- D** correct

- 5 N.ME.03.18:** Place and compare fractions on a number line.

Identify a point on the number line.

- A** incorrect fraction
- B** incorrect fraction - incorrect use of scale
- C** correct
- D** counted backward from nearest whole number

- 6 N.ME.03.18:** Place and compare fractions on a number line.

Order three fractions from least to greatest.

- A** correct
- B** mixed order
- C** numerators ordered from least to greatest
- D** mixed order

- 7 N.MR.03.09:** Use multiplication and division to show the inverse relationship.

Find related division facts, given multiplication facts.

- A** addition fact
- B** multiplication fact, but not in family
- C** subtraction fact
- D** correct

- 8 N.MR.03.09:** Use multiplication and division to show the inverse relationship.

Find related division and multiplication facts.

- A** correct
- B** addition and subtraction facts
- C** unrelated multiplication facts
- D** unrelated multiplication and division facts

- 9 N.MR.03.10:** Recognize multiplication and division situations.

Given a contextualized situation, identify the operation.

- A** divided
- B** correct
- C** added
- D** subtracted

- 10 N.MR.03.10:** Recognize multiplication and division situations.

Given a contextualized situation, identify the operation.

- A** correct
- B** subtracted
- C** added
- D** multiplied

- 11 N.FL.03.11:** Find products to 10×10 and related quotients.

Divide a 2-digit number by a 1-digit number.

- A** added
- B** subtracted
- C** correct
- D** incorrect quotient

- 12 N.FL.03.11:** Find products up to 10×10 and related quotients.

Given the product, identify its factors.

- A** correct
- B** correct factor \times incorrect factor
- C** correct factor \times incorrect factor
- D** correct factor \times incorrect factor

- 13 G.GS.03.01:** Identify points, line segments, lines, and distance.

Given a diagram of a line segment, identify its name.

- A** correct
- B** not line segment
- C** not line segment
- D** not line segment

- 14 G.GS.03.01:** Identify points, line segments, lines, and distance.

Find the distance in units on a number line.

- A** one unit less than correct distance
- B** correct
- C** included starting point as one unit
- D** two units more than correct distance

- 15 G.GS.03.02:** Identify perpendicular lines and parallel lines.

Identify the diagram without any parallel lines.

- A** correct
- B** diagram contains parallel lines
- C** diagram contains parallel lines
- D** diagram contains parallel lines

- 16 G.GS.03.02:** Identify perpendicular lines and parallel lines.

Identify the perpendicular sides of the given shape.

- A** neither parallel nor perpendicular sides
- B** neither parallel nor perpendicular sides
- C** correct
- D** parallel sides

- 17 G.GS.03.03:** Identify parallel faces of rectangular prisms.

Identify the parallel faces of a rectangular prism.

- A** correct
- B** perpendicular faces
- C** perpendicular faces
- D** perpendicular faces

- 18 G.GS.03.03:** Identify parallel faces of rectangular prisms.

Identify the parallel faces of a rectangular prism.

- A** perpendicular faces
- B** perpendicular faces
- C** perpendicular faces
- D** correct

- 19 G.GS.03.04:** Identify, describe, compare, and classify 2-D shapes.

Identify which figure is not a parallelogram.

- A** correct
- B** parallelogram
- C** parallelogram
- D** parallelogram

- 20 G.GS.03.04:** Identify, describe, compare, and classify 2-D shapes.

Identify the name of a shape with all four sides always the same length.

- A** quadrilateral with sides sometimes the same length
- B** correct
- C** not a quadrilateral
- D** quadrilateral with sides sometimes the same length

- 21 G.SR.03.05:** Compose and decompose triangles and rectangles.

Determine the name of a shape composed of two given triangles.

- A** incorrect 2-D shape
- B** incorrect 2-D shape
- C** correct
- D** 3-D shape

- 22 G.SR.03.05:** Compose and decompose triangles and rectangles.

Given a polygon, identify the component parts.

- A** correct
- B** too few triangles to compose shape
- C** incorrect type of triangles
- D** incorrect type of polygons

- 23 G.GS.03.06:** Identify, describe, and classify familiar 3-D solids.

Identify the name of a 3-D solid, given a description about its base.

- A** incorrect solid
- B** correct
- C** incorrect solid
- D** incorrect solid

- 24 G.GS.03.06:** Identify, describe, compare, and classify 3-D solids.

Identify the name of a 3-D solid, given three clues.

- A** incorrect solid
- B** incorrect solid
- C** correct
- D** 2-D shape

- 25 M.UN.03.06:** Find the area of a region by covering and counting square units.

Find the area of rectangle in square units.

- A** perimeter = area
- B** correct
- C** greater area
- D** greater area
(length \times length)

- 26 M.UN.03.06:** Find the area of a region by covering and counting square units.

Find the area of the triangle.

- A** length of one side
- B** correct
- C** thrice the length of one side
- D** twice the area of triangle

- 27 M.UN.03.07:** Distinguish between units of length and area.

Identify the unit of area.

- A** unit of length
- B** unit of length
- C** correct
- D** unit of volume

- 28 M.UN.03.07:** Distinguish between units of length and area.

Identify the practical unit of length.

- A** correct
- B** impractical unit of length given context
- C** unit of area
- D** unit of area

29 M.UN.03.05: Calculate the area and perimeter of a square and rectangle.

Determine the perimeter of a square, given its side lengths.

- A** length of two sides
- B** correct
- C** twice the perimeter
- D** perimeter = area

30 M.UN.03.05: Calculate the area and perimeter of square and rectangle.

Determine the area of the rectangle, given its width and length.

- A** length + width
- B** area = perimeter
- C** width \times width
- D** correct

31 N.MR.03.14: Solve division problems involving remainders.

Determine the remainder in a contextualized division problem.

- A** one less than remainder
- B** correct
- C** one more than remainder
- D** divisor

32 N.MR.03.14: Solve division problems involving remainders.

Determine the remainder in a contextualized division problem.

- A** divisor
- B** two more than remainder
- C** one more than remainder
- D** correct

33 N.MR.03.15: Identify the operation for a problem; solve.

Identify division for a contextualized problem and solve for the quotient.

- A** correct
- B** divisor + quotient
- C** incorrect quotient
- D** total minus divisor

34 N.MR.03.15: Identify the operation for a problem; solve.

Identify division (or repeated subtraction) in context and solve it.

- A** incorrect day of week
- B** correct
- C** incorrect day of week
- D** incorrect day of week

35 M.PS.03.12: Solve problems involving money, length, and time.

Calculate the difference in students' heights given in feet and inches.

- A** subtracted inches, but not feet
- B** two inches less than correct difference
- C** correct
- D** incorrectly subtracted inches

36 M.PS.03.12: Solve problems involving money, length, and time.

Calculate the remaining money amount after making two purchases.

- A** correct
- B** error in tens place, over by 10 cents
- C** subtracted only one purchase
- D** incorrect difference

- 37 M.PS.03.13:** Solve problems about the perimeter and area of rectangles.

Find the amount of fencing needed for a rectangular garden, given its length and width.

- A** length + width
- B** length + width + width
- C** correct
- D** perimeter = area

- 38 M.PS.03.13:** Solve problems about the perimeter and area of rectangles.

Find the area of a rectangular picture, given its length and width.

- A** length + width
- B** length + width + width
- C** correct
- D** area = perimeter

- 39 D.RE.03.01:** Read and interpret horizontal and vertical bar graphs.

Determine which statement about a given vertical bar graph is not true.

- A** true statement
- B** true statement
- C** true statement
- D** correct

- 40 D.RE.03.02:** Read scales on axes; identify the maximum, minimum and range on bar graphs.

Determine the range of data represented in a bar graph.

- A** maximum
- B** 2nd greatest value
- C** correct
- D** greatest value minus 3rd greatest value

- 41 D.RE.03.03:** Solve problems using info in bar graphs; compare.

Find the total of the same category from two bar graphs.

- A** correct total but for different category
- B** used values on scale but not correct intermediate values
- C** incorrect addition
- D** correct

- 42 G.SR.03.07:** Show the front, top, and side views of solids built with cubes.

Identify the top view of a solid built with cubes.

- A** front view
- B** correct
- C** right side view
- D** not top view

- 43 M.PS.03.10:** Add and subtract lengths, weights, and times.

Subtract lengths given in feet and inches.

- A** added instead of subtracted
- B** minuend
- C** correct feet, incorrect inches
- D** correct

- 44 M.PS.03.11:** Add and subtract money in dollars and cents.

Subtract money in dollars and cents.

- A** incorrect dollars, correct cents
- B** incorrect dollars and dimes, correct pennies
- C** subtracted smaller values from larger values
- D** correct

45 M.UN.03.01: Use common units of measurement.

Identify the unit of measurement for mass.

- A** standard unit of length
- B** correct
- C** standard unit of length
- D** metric unit of length

46 M.UN.03.02: Measure in mixed units in the same system.

Find the amount of lapsed time, given two analog clock faces.

- A** correct
- B** correct hours, but number of minutes from first clock
- C** correct hours, but number of minutes from second clock
- D** correct hours, but number of minutes over by 45 minutes

47 M.UN.03.03: Know the relationship between sizes of standard units.

Determine which metric measurement is the greatest length.

- A** greatest measure
- B** neither greatest nor least measurement
- C** correct
- D** least measurement

48 M.UN.03.04: Know benchmark temperatures; compare.

Identify the temperature in °F that is closest to freezing for water.

- A** underestimate (closest measure for unit in °C)
- B** underestimate
- C** underestimate
- D** correct

- 49 M.UN.03.08:** Compare the relative sizes of square inch and square centimeter.

Identify the square with an area of square inch.

- A** correct
- B** square centimeter
- C** larger than square centimeter, smaller than square inch
- D** larger than square inch

- 50 N.FL.03.06:** Add and subtract through 2-digit numbers with regrouping and through 4-digit numbers without regrouping.

Subtract two 3-digit numbers.

- A** error in ones place
- B** correct
- C** subtracted smaller values from larger values
- D** added in ones, but subtracted smaller from larger values in tens place

- 51 N.FL.03.07:** Estimate sums and differences and judge reasonableness.

Estimate the sum of two 3-digit numbers.

- A** underestimate
- B** underestimate
- C** correct
- D** overestimate

- 52 N.ME.03.01:** Read and write numbers up to 10,000.

Translate the standard form of a number into word form.

- A** incorrect values in hundreds and tens places
- B** incorrect value in tens place
- C** correct
- D** transposed ones and tens place

53 N.ME.03.02: Use expanded notation; identify the place value of digits.

Translate expanded notation into standard form.

- A** $a00 + b0 + c = a00,b0c$
- B** $a00 + b0 + c = a,b0c$
- C** $a00 + b0 + c = a,0bc$
- D** correct

54 N.ME.03.03: Compare and order numbers up to 10,000.

Identify the true compound inequality.

- A** incorrect inequality (reversed inequality symbols)
- B** incorrect inequality (mixed order)
- C** correct
- D** incorrect inequality (mixed order)

55 N.ME.03.05: Know that even numbers end in 0, 2, 4, 6 or 8.

Know even numbers can be divided into two sets with no remainder.

- A** odd number
- B** correct
- C** odd number
- D** odd number

56 N.ME.03.19: Understand a fraction as the sum of unit fractions.

Calculate the sum of three of the same unit fractions:
 $1/x + 1/x + 1/x$.

- A** $1/(3x)$, i.e., multiplied numerators, added denominators
- B** $1/x$
- C** $3/(3x)$, i.e., added numerators and denominators
- D** correct

57 N.ME.03.21: Understand the meaning of \$0.50 and \$0.25.

Translate the fractional part of dollar to decimal notation.

- A** a/b of a dollar = \$0.0b
- B** a/b of a dollar = \$0.ab
- C** correct
- D** a/b of a dollar = \$0.b0

58 N.MR.03.12: Find solutions to sentences such as $7 \times \underline{\quad} = 42$.

Find the number to go in the box in a multiplication sentence.

- A** factor \times product
- B** factor + product
- C** incorrect factor
- D** correct

59 N.MR.03.20: Model addition and subtraction of fractions on a number line.

Identify an addition sentence modeled on a number line.

- A** incorrect addend, added denominators
- B** correct
- C** correct addends but added denominators
- D** subtraction sentence

4th

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