Functional Independence
Fall 2010

Mathematics

Item Descriptors

Grade 8

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DIRECTIONS: Read each question. Choose the BEST answer for each question.
NOTE: For each item listed throughout this booklet, the first statement is a summary of the Michigan Extended Grade Level Content Expectation (EGLCE) and the second statement or problem is the descriptor for the item’s stem or question.

1. N.MR.07.FI.EG06: Create, describe, and extend simple number patterns

   Find next number in skip-counting pattern given in table

   A. added 1 to previous number
   B. correct
   C. sum of all numbers in table

2. N.MR.07.FI.EG07: Find the next number in a simple repeating pattern

   Determine rule for skip-counting pattern

   A. correct
   B. added first number in pattern
   C. ten = one

3. N.MR.07.FI.EG07: Find the next number in a simple repeating pattern

   Determine rule for skip-counting pattern

   A. one hundred = ten
   B. correct
   C. one hundred = one thousand

4. N.ME.07.FI.EG02: Recognize representations for whole numbers to 100,000

   Given key and blocks, determine value shown

   A. one hundred = ten thousand
      ten = one hundred
   B. one hundred = one thousand
      ten = one hundred
   C. correct

5. N.ME.07.FI.EG03: Express numbers to 100,000 using place value

   Determine which number has a given number in ten thousands place

   A. correct
   B. given number in thousands place
   C. given number in tens place
6  **N.ME.07.FI.EG04**: Compare and order numbers to 100,000

Identify list of numbers ordered from least to greatest

A  greatest to least
B  mixed order
C  correct

7  **M.UN.07.FI.EG02**: Select units of measure

Select unit of measure for area

A  correct
B  unit of measure for volume
C  unit of measure for length

8  **M.UN.07.FI.EG01**: Use standard tools for measurement

Identify tool used to measure time

A  tool used to measure weight
B  correct
C  tool used to measure length

9  **M.UN.07.FI.EG01**: Use standard tools for measurement

Read thermometer in °F

A  less than correct temperature
B  correct
C  temperature above highest shown on thermometer

10 **M.UN.07.FI.EG09**: Convert units

Convert feet to inches, given 1 foot = 12 inches

A  added 12 to number of feet
B  correct
C  twice correct number of inches

11 **M.UN.07.FI.EG10**: Tell time on a radial or digital clock to the nearest half-hour

Subtract time from time shown on analog clock

A  correct
B  time shown on clock
C  added, instead of subtracted
12 **M.UN.07.FI.EG10:** Tell time on a radial or digital clock to the nearest half-hour

Tell time on analog clock
A half hour earlier
B correct
C one hour later

13 **G.LO.07.FI.EG03:** Read, interpret and use maps and grids

Interpret map to find direction
A incorrect direction
B opposite direction
C correct

14 **G.LO.07.FI.EG02:** Name locations using simple coordinate systems

Interpret grid to name location
A correct
B incorrect location
C incorrect location

15 **G.LO.07.FI.EG03:** Read, interpret and use maps and grids

Interpret map to locate building
A building in opposite direction
B building in opposite direction
C correct

16 **M.UN.07.FI.EG11:** Use equivalent calendar units

Translate days into weeks
A too few weeks
B correct
C too many weeks

17 **M.PS.07.FI.EG12:** Solve word problems

Calculate elapsed time
A correct
B 30 minutes = 1 hour
C 30 minutes = 2.5 hours

18 **D.RE.07.FI.EG04:** Solve problems using data

Interpret table to find maximum
A minimum
B correct
C neither maximum nor minimum

19 **D.RE.07.FI.EG01:** Read data

Translate data into bar graph
A all 3 bars incorrect
B correct
C two incorrect bars
20 D.RE.07.FI.EG04: Solve problems using data
Interpret pictograph with a key of 10
A correct
B incorrect category
C did not use scale

21 N.FL.07.FI.EG09: Add and subtract one-, two- and three-digit numbers
Add two 2-digit numbers
A twice the sum
B correct
C 10 less than sum

22 N.MR.07.FI.EG14: Solve simple division problems
Divide in word problem
A correct
B incorrect quotient and remainder
C divisor = quotient

23 N.MR.07.FI.EG10: Solve simple open sentences
Multiply two 1-digit numbers
A added
B used one incorrect factor
C correct

24 M.UN.07.FI.EG13: Recognize equivalent sets of coins and bills
Identify matching set of coins given bill
A dime has value of 25 cents
B nickel has value of 10 cents
C correct

25 M.PS.07.FI.EG14: Tell the amount of money in dollars and cents
Given bills, determine total value
A five-dollar bill has value of one dollar
B correct
C five-dollar bill has value of ten dollars

26 N.ME.07.FI.EG15: Recognize, name, represent and write unit fractions
Identify fraction represented in shaded figures
A correct
B too much shading
C not enough shading
27 N.ME.07.FI.EG16: Place 0 and halves on number line
   Identify measurement shown on ruler
   A did not include fractional portion of measurement
   B correct
   C one inch greater

28 N.ME.07.FI.EG20: Understand sum of unit fractions
   Add three unit fractions
   A unit fraction given,
       \( \frac{1}{x} + \frac{1}{x} + \frac{1}{x} = \frac{1}{x} \)
   B adds numerator and denominator,
       \( \frac{1}{x} + \frac{1}{x} + \frac{1}{x} = \frac{3}{(3x)} \)
   C correct

29 N.MR.07.FI.EG18: Compare and order fractions
   Order three fractions from least to greatest
   A correct
   B mixed order
   C greatest to least

30 N.ME.07.FI.EG22: solve decimal fractions up to 2 decimals
   Translate fraction to decimal
   A hundredths = tenths
   B correct
   C hundredths = thousandths

31 N.FL.07.FI.EG23: Apply estimation in solving problems
   Estimate subtraction in context
   A overestimate
   B overestimate
   C correct

32 N.MR.07.FI.EG24: Select numbers to solve problems
   Add two 3-digit numbers in context
   A correct
   B included extra addend
   C included two extra addends

33 N.MR.07.FI.EG25: Solve applied problems
   Multiply in context
   A one of factors
   B added
   C correct
34  **A.FO.07.FI.EG02**: Represent information using algebra

   Translate division word problem into number sentence

   A  correct
   B  multiplication sentence
   C  addition sentence

35  **A.FO.07.FI.EG02**: Represent information using algebra

   Translate multiplication word problem into number sentence

   A  addition sentence
   B  division sentence
   C  correct