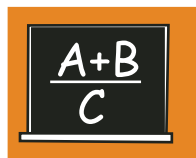


# Functional Independence

Fall 2012



## Mathematics

*Item Descriptors*

**Grade 8**





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**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

Interpret constant pattern in table

- A** correct
- B** rounded up to next dollar
- C** over by \$1

- 2 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

- 3 N.ME.07.FI.EG01:** Read, write, and count using whole numbers to 100,000

Translate word form of number to standard form

- A** incorrect in tens place
- B** correct
- C** incorrect in hundreds place

- 4 N.ME.07.FI.EG02:** Recognize equivalent 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 number with given place value

- A** under by factor of 10
- B** over by factor of 10
- C** correct

- 6 N.ME.07.FI.EG04:** Compare and order numbers to 100,000

Order three 3-digit numbers from least to greatest

- A** correct
- B** mixed order
- C** mixed order

- 7 M.UN.07.FI.EG02:** Select appropriate 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:** Select and use standard tools for measurement

Read thermometer in °F

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

- 9 M.UN.07.FI.EG04:** Measure lengths to the nearest quarter-inch

Measure length to nearest quarter inch

- A** over by 1/2 inch
- B** correct
- C** under by 1/4 inch

- 10 M.UN.07.FI.EG08:** Measure perimeter

Calculate perimeter of rectangle given lengths of four sides

- A** correct
- B** 4 times the width
- C** 4 times the length

**11 G.LO.07.FI.EG02:** Find and name locations using simple coordinate systems

Locate point on 1st coordinate grid

- A correct
- B  $(x, y) = (y, x)$
- C  $(x, y) = (y, y)$

**12 G.LO.07.FI.EG03:** Read, interpret, and use maps and grids with legends

Follow directions to find location

- A incorrect location
- B incorrect location
- C correct

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

Interpret map to find direction

- A incorrect direction
- B opposite direction
- C correct

**14 M.UN.07.FI.EG09:** Convert units of measure

Convert feet to inches given 1 foot = 12 inches

- A subtracted feet from inches
- B added feet to inches
- C correct

**15 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 hour later

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

Convert hours to days

- A incorrect number of hours
- B incorrect number of hours
- C correct

- 17 M.PS.07.FI.EG12:** Solve one- or two-step word problems

Calculate elapsed time

- A** correct
- B** 30 minutes = 1 hour
- C** 30 minutes = 2.5 hours

- 18 D.RE.07.FI.EG01:** Read data from charts, tables, graphs, tallies, and pictographs

Translate data into bar graph

- A** all 3 bars incorrect
- B** correct
- C** two incorrect bars

- 19 D.RE.07.FI.EG03:** Describe the shape of data using informal language

Describe data in line graph

- A** correct
- B** opposite trend
- C** incorrect trend

- 20 D.RE.07.FI.EG04:** Solve problems using data in tables, graphs, tallies, and pictographs

Interpret graph

- 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.EG10:** Solve simple open sentences

Solve subtraction sentence for minuend

- A** subtracted subtrahend from difference
- B** under by 5
- C** correct

**23 N.FL.07.FI.EG13:** Calculate simple products

Multiply or use repeated addition in word problem

- A** used incorrect factor (or did not include one addend)
- B** under by 5
- C** correct

**24 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

**25 M.UN.07.FI.EG13:** Recognize equivalent sets of coins and bills

Recognize equivalent set of coins

- A** over by 1 dime
- B** correct
- C** nickel instead of quarter

**26 N.ME.07.FI.EG16:** Place 0 and halves on a number line

Identify shape at given location on number line

- A** correct
- B** under by 2
- C** over by 1

**27 N.ME.07.FI.EG20:** Understand sum of unit fractions

Identify unit fractions given sum

- A**  $a/b = a/b + a/b + a/b$
- B**  $a/b = 1/b + a/b$
- C** correct



**28 N.ME.07.FI.EG15:** Recognize, name, represent, and write commonly used unit fractions

Identify shaded figure

- A** correct
- B** too much shading
- C** not enough shading

**29 N.MR.07.FI.EG18:** Compare and order fractions within the same fraction family

Order three fractions from least to greatest

- A** correct
- B** mixed order
- C** greatest to least

**30 N.MR.07.FI.EG21:** Multiply fractions by whole numbers

Identify equivalent expression to multiplying a whole number by a unit fraction

- A** correct
- B**  $a \times 1/b = a + a + \dots + a$  (b addends)
- C**  $a \times 1/b = a + 1/b + \dots + a + 1/b$  (b addends)

**31 N.MR.07.FI.EG24:** Select appropriate numbers to solve problems

Add two 3-digit numbers in context

- A** correct
- B** included extra addend
- C** included two extra addends

**32 N.MR.07.FI.EG25:** Solve applied problems

Multiply two 2-digit numbers

- A** under by 5
- B** correct
- C** over by 5

**33 N.FL.07.FI.EG23:** Apply estimation in solving problems

Estimate subtraction in context

- A** overestimate
- B** overestimate
- C** correct

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

Translate multiplication word problem into number sentence

- A** addition sentence
- B** division sentence
- C** correct

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

Translate division word problem into number sentence

- A** correct
- B** multiplication sentence
- C** addition sentence





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