Functional Independence
Spring 2013
Mathematics

Item Descriptors

Grade 11

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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.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1</strong></td>
<td>F.11.FI.EB01: Create, describe, and extend simple number patterns</td>
</tr>
<tr>
<td>Find missing number in skip-counting pattern</td>
<td></td>
</tr>
<tr>
<td><strong>A</strong></td>
<td>added 1 to previous number</td>
</tr>
<tr>
<td><strong>B</strong></td>
<td>correct</td>
</tr>
<tr>
<td><strong>C</strong></td>
<td>over by 2</td>
</tr>
<tr>
<td><strong>2</strong></td>
<td>F.11.FI.EB02: Find the next number in a simple repeating pattern</td>
</tr>
<tr>
<td>Determine rule for skip-counting pattern</td>
<td></td>
</tr>
<tr>
<td><strong>A</strong></td>
<td>correct</td>
</tr>
<tr>
<td><strong>B</strong></td>
<td>divided, instead of subtracted</td>
</tr>
<tr>
<td><strong>C</strong></td>
<td>added, instead of subtracted</td>
</tr>
<tr>
<td><strong>3</strong></td>
<td>F.11.FI.EB03: Identify, describe, and extend patterns found in daily life</td>
</tr>
<tr>
<td>Find next time in a given pattern involving time</td>
<td></td>
</tr>
<tr>
<td><strong>A</strong></td>
<td>subtracted 30 minutes, instead of adding</td>
</tr>
<tr>
<td><strong>B</strong></td>
<td>correct</td>
</tr>
<tr>
<td><strong>C</strong></td>
<td>added 60 minutes, instead of 30 minutes</td>
</tr>
<tr>
<td><strong>4</strong></td>
<td>F.11.FI.EB03: Identify, describe, and extend patterns found in daily life</td>
</tr>
<tr>
<td>Describe pattern in calendar</td>
<td></td>
</tr>
<tr>
<td><strong>A</strong></td>
<td>incorrect pattern</td>
</tr>
<tr>
<td><strong>B</strong></td>
<td>incorrect pattern</td>
</tr>
<tr>
<td><strong>C</strong></td>
<td>correct</td>
</tr>
</tbody>
</table>
5 G.11.FI.EB01: Select and use standard tools for measurement

Identify tool for measuring height

A tool for measuring time
B tool for measuring weight
C correct

6 G.11.FI.EB03: Measure and compare integer temperatures

Compare temperatures in degrees Fahrenheit

A half of correct difference
B correct
C temperature on 2nd thermometer

7 G.11.FI.EB04: Read gauges and meters

Read gasoline gauge

A correct
B more than correct amount
C less than correct amount

8 G.11.FI.EB08: Measure perimeter

Find perimeter of rectangle given length and width

A area = perimeter
B length + width
C correct

9 G.11.FI.EB10: Tell time on a radial or digital clock to the nearest 5 minutes

Tell time on radial watch

A correct
B one hour later than correct time
C location of minute hand as hours, location of hour hand as minutes (times 5)

10 G.11.FI.EB09: Convert measurements of length

Convert yards to feet

A added yards to 3 feet
B correct
C 1 yard = 12 feet
11 G.11.FI.EB11: Know equivalent calendar units
  Convert years to months
  A  1 year = 7 months
  B  correct
  C  1 year = 18 months

12 G.11.FI.EB14: Solve one- and two-step word problems
  Subtract measurement in inches in context
  A  correct
  B  10 inches greater than correct length
  C  added

13 G.11.FI.EB13: Read and interpret schedules
  Interpret bus schedule
  A  first arrival time at previous corner
  B  correct
  C  second arrival time at next corner

14 G.11.FI.EB12: Use a calendar and equivalent calendar units
  Determine number of weeks between two dates given two calendars
  A  one less week than correct number of weeks
  B  correct
  C  one more week than correct number of weeks

15 G.11.FI.EB16: Tell the amount of money in dollars and cents
  Determine amount of money shown given photos of bills and coins
  A  $10 bill = $1
  B  correct
  C  quarter, dimes, and nickels = 10 cents

16 G.11.FI.EB17: Add and subtract money in dollars and cents
  Subtract money given in decimal notation
  A  subtracted smaller values from greater
  B  correct
  C  correct dollar amount, incorrect number of cents
17 G.11.FI.EB17: Add and subtract money in dollars and cents

Add money given in decimal notation

A subtracted
B correct number of dollars and cents from first addend
C correct

18 G.11.FI.EB18: Round money

Round money given in decimal notation to nearest dollar

A round down amount over 50 cents
B correct
C nearest ten dollars

19 G.11.FI.EB20: Read, interpret, and use maps and grids with legends

Describe directions to location on map

A incorrect directions
B incorrect directions
C correct

20 G.11.FI.EB19: Find and name locations using simple coordinate systems

Identify location of point on coordinate grid

A \((x - 1, y)\)
B \((y, x)\)
C correct

21 D.11.FI.EB04: Describe the shape of data using informal language

Describe data in line graph

A correct
B opposite description
C incorrect description

22 D.11.FI.EB07: Identify data needed to solve a problem

Select description to determine total distance ran

A correct
B description for starting times
C description for elapsed time
23 N.11.FI.EB01: Read, write, and count using whole numbers to 100,000
Add 1 to given amount
A correct
B 10 times correct sum
C 100 times correct sum

24 N.11.FI.EB03: Express numbers to 100,000 using place value
Identify number with given number in thousands place
A correct
B ten thousands place
C hundreds place

25 N.11.FI.EB05: Round whole numbers
Round 3-digit number to nearest hundred
A rounded down number over 50
B rounded to nearest tens place
C correct

26 N.11.FI.EB04: Compare and order numbers to 100,000
Identify number less than given 4-digit number
A correct
B greater than given number
C greater than given number

27 N.11.FI.EB10: Understand percentages
Identify circle with given percentage of shading
A correct
B circle with less than given % of shading
C circle with considerably less than given % of shading

28 N.11.FI.EB11: Convert percentages
Convert fraction to decimal
A \( \frac{a}{b} = 0.a0 \)
B \( \frac{a}{b} = 0.b0 \)
C correct
29 N.11.FI.EB12: Solve word problems involving percentages

Calculate amount of sales tax given tax rate and monetary value

A incorrect amount
B incorrect amount
C correct

30 N.11.FI.EB15: Add and subtract two fractions with like denominators

Add two fractions with like denominators

A added numerators and denominators
B correct
C subtracted

31 N.11.FI.EB17: Round money

Round money in decimal notation to nearest dollar

A rounded down amount over 50 cents
B rounded to nearest dime
C correct

32 N.11.FI.EB13: Recognize, name, represent, and write fractions

Identify shaded rectangles that match given fraction, x/y

A correct
B model with x shaded rectangles and y nonshaded rectangles
C model with x + y rectangles, completely shaded

33 N.11.FI.EB14: Compare and order fractions

List fractions from least to greatest

A correct
B mixed order
C mixed order

34 N.11.FI.EB16: Compare and order decimal fractions in relation to money

Compare money given in decimal notation

A incorrect comparison
B correct
C incorrect comparison

MI-Access Functional Independence
### 35 N.11.FI.EB19: Apply estimation in solving problems

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<thead>
<tr>
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<tbody>
<tr>
<td>A</td>
<td>underestimate</td>
</tr>
<tr>
<td>B</td>
<td>correct</td>
</tr>
<tr>
<td>C</td>
<td>overestimate</td>
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### 36 N.11.FI.EB21: Solve applied problems

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>A</td>
<td>incorrect total</td>
</tr>
<tr>
<td>B</td>
<td>used rate $1$/hour less than correct rate</td>
</tr>
<tr>
<td>C</td>
<td>correct</td>
</tr>
</tbody>
</table>

### 37 N.11.FI.EB21: Solve applied problems

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>multiplied amount given in item by incorrect fraction</td>
</tr>
<tr>
<td>B</td>
<td>amount given in item</td>
</tr>
<tr>
<td>C</td>
<td>correct</td>
</tr>
</tbody>
</table>

### 38 A.11.FI.EB01: Solve applied problems involving rates

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>correct</td>
</tr>
<tr>
<td>B</td>
<td>50 mph less than correct speed</td>
</tr>
<tr>
<td>C</td>
<td>100 mph less than correct speed</td>
</tr>
</tbody>
</table>

### 39 A.11.FI.EB02: Identify the unknown quantity

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<table>
<thead>
<tr>
<th></th>
<th></th>
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<tbody>
<tr>
<td>A</td>
<td>total divided by addend</td>
</tr>
<tr>
<td>B</td>
<td>correct</td>
</tr>
<tr>
<td>C</td>
<td>total + addend</td>
</tr>
</tbody>
</table>

### 40 A.11.FI.EB03: Represent information using algebra

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<tbody>
<tr>
<td>A</td>
<td>correct</td>
</tr>
<tr>
<td>B</td>
<td>difference, instead of sum</td>
</tr>
<tr>
<td>C</td>
<td>addend + total = addend</td>
</tr>
</tbody>
</table>