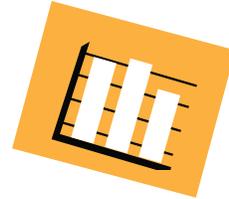
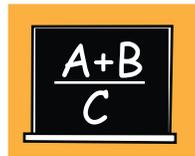


# Functional Independence

## Sample Assessment Booklet

Updated 10/21/05

## Mathematics



Grade **11**

## Introduction

The *Grade 11 Mathematics Functional Independence Sample Assessment Booklet* has been developed to provide teachers, administrators, parents, students, and other interested stakeholders with a sample of the content and length of the assessment. Additional *Mathematics Functional Independence Sample Assessment Booklets* are available in grades 3, 5, and 8. The *Sample Assessment Booklets* can be downloaded from the MI-Access Web page at [www.mi.gov/mi-access](http://www.mi.gov/mi-access).

The table below indicates the number of core items and possible points on the *Grade 11 Functional Independence Mathematics Assessment*, as well as the number of pilot items that will be embedded in the assessment. A student's overall performance score will be based only on his or her performance on the core items. Data will be collected about student performance on the embedded pilot items, but they will **not** count toward a student's overall performance score. A portion of the core items will be released electronically each year. The embedded items will be used to replace the released items in future assessment booklets.

<b>Mathematics Strand</b>	<b>Number of Core Items</b>
Patterns and Relationships	4
Geometry and Measurement	16
Data Analysis and Statistics	2
Number Sense and Numeration	15
Algebraic Operations and Analytical Thinking	3
<b>TOTAL CORE ITEMS/POINTS</b>	<b>40</b>
<b>EMBEDDED ITEMS</b>	<b>10</b> <b>(Numbers vary by strand and topic)</b>
<b>TOTAL ITEMS</b>	<b>50</b>

The *Grade 11 Functional Independence Mathematics Sample Assessment Booklet* reflects the content and length of the operational assessment, which will be administered for the first time in fall 2005. Placeholders for embedded pilot items have been designated in the *Sample Assessment Booklet* (items 41-50). Please note that the positions of the embedded pilot item placeholders have been determined solely for the ease and convenience of the users of the *Sample Assessment Booklet*. The placement of embedded pilot items in the operational assessment booklets will vary from year to year.

**DIRECTIONS:** Read each question. Choose the **BEST** answer for each question.

**Additional Information:**

- Please note that the *Functional Independence Mathematics Assessments* are based on the *Extended Grade Level Content Expectations (EGLCE)* and benchmarks (EB). The EGLCE or EB that each item in the booklet measures can be found on page 39.
- Braille versions of the assessment are available for the *Functional Independence Mathematics* operational assessments.
- For the *Functional Independence Mathematics Assessment*, a student may (1) use a calculator, and (2) have certain assessment item stems and certain answer choices read aloud, if the Individualized Education Program Team determines these are appropriate assessment accommodations. Some item stems and answer choices must **NOT** be read aloud, such as where the question is, “What is the numeral for two?”, where one of the choices would be “2.” The operational manual has a table indicating which item stems and answer choices cannot be read aloud.
- Students may record their answers and perform their computations in the assessment booklet, so extra paper will not be necessary. Clear acetate rulers are provided for students to answer questions requiring measurement of length.
- Because of the population being assessed, there may be instances in which assessment administrators choose to use the actual items, such as coins, bills, and clocks, instead of relying on the pictures provided in the assessment booklet. However, the actual item may **NOT** change the nature of the question or elicit a different response.

Use the table below to answer question 1 on the next page.

### Card Game

Round	Number of Cards
1	
2	
3	
4	?

**1** Tim is playing a card game.

In the first round, he gives out 2 cards to each player.

In the second round, he gives out 4 cards to each player.

In the third round, he gives out 6 cards to each player.

If the pattern continues, how many cards will each player get in the fourth round?

**A** 12

**B** 10

**C** 8

Use the table below to answer question 2.

### John's Number of Butterflies

Day	Number of Butterflies
Sunday	2
Monday	4
Tuesday	8
Wednesday	16
Thursday	?

- 2 If the pattern continues, how many butterflies will John catch on Thursday?
- A 16
- B 24
- C 32

- 3 Which statement describes this pattern?

24, 19, 14, 9, \_\_\_\_\_

- A Subtract 5 from each number.
- B Divide each number by 5.
- C Add 5 to each number.
- 

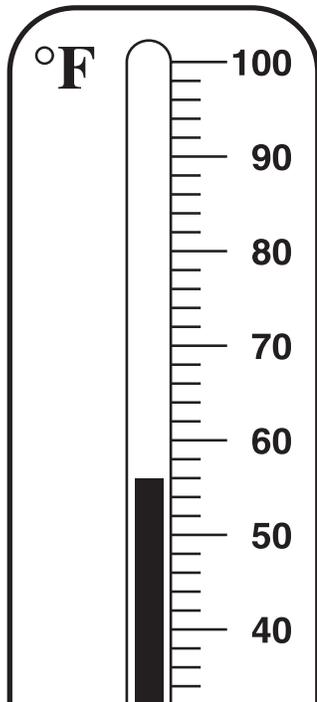
- 4 Rob plays baseball every 5 days.

In July he played on the 5th, 10th, and 15th.

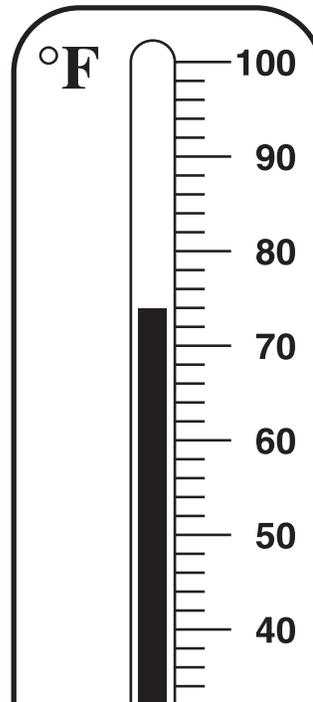
What is the **next** day he will play baseball?

- A 17th
- B 20th
- C 25th

Use the figures below to answer question 5.



**Morning**



**Afternoon**

- 5 What is the **difference** in temperature from the morning to the afternoon?
- A 18 degrees
  - B 19 degrees
  - C 20 degrees

6 Which unit can be used to describe the distance between two buildings?

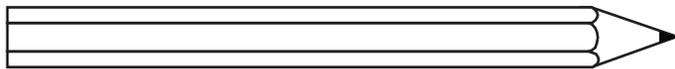
A gallons

B feet

C degrees

---

7 What is the length of the pencil below?



A  $3\frac{1}{4}$  inches

B  $3\frac{1}{2}$  inches

C  $3\frac{3}{4}$  inches

**8** A foot is equal to 12 inches.

Tom measured the length of his pencil.

The pencil is 6 inches long.

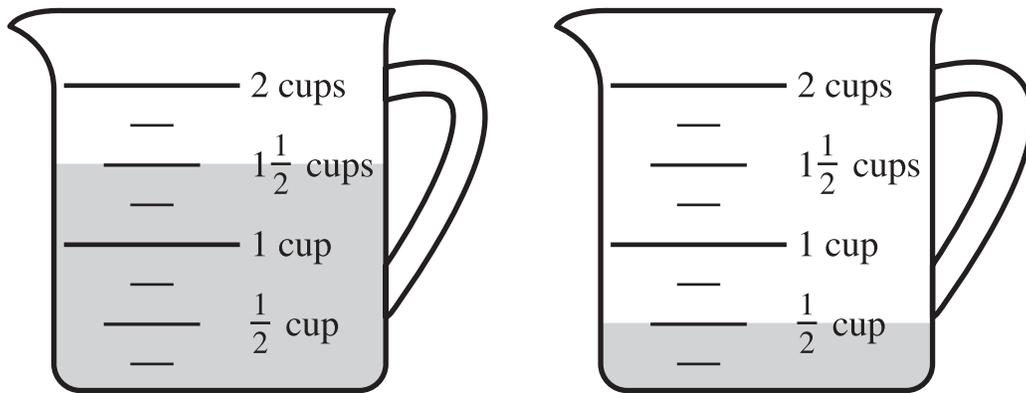
What is the length of Tom's pencil in feet?

**A**  $\frac{1}{2}$  foot

**B**  $\frac{1}{3}$  foot

**C**  $\frac{1}{4}$  foot

Use the figures below to answer question 9.



9 If the juice in both cups is combined, how much juice will there be **altogether**?

- A  $1\frac{1}{2}$  cups
- B  $1\frac{3}{4}$  cups
- C 2 cups

Use the figure below to answer question 10.

<b>June</b>						
<b>Sunday</b>	<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>	<b>Saturday</b>
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>
<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>
<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>	<b>25</b>	<b>26</b>	<b>27</b>
<b>28</b>	<b>29</b>	<b>30</b>				

**10** Pat's birthday is June 25.

John's birthday is 4 days after Pat's birthday.

On what day of the week is John's birthday?

- A** Monday
- B** Sunday
- C** Thursday

Use the calendar below to answer question 11.

<b>March</b>						
<b>Sunday</b>	<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>	<b>Saturday</b>
	<b>1</b> Bowling	<b>2</b> Tennis	<b>3</b> Bowling	<b>4</b> Tennis	<b>5</b> Bowling	<b>6</b>
<b>7</b>	<b>8</b> Bowling	<b>9</b> Tennis	<b>10</b> Bowling	<b>11</b> Tennis	<b>12</b> Bowling	<b>13</b>
<b>14</b>	<b>15</b> Bowling	<b>16</b> Tennis	<b>17</b> Bowling	<b>18</b> Tennis	<b>19</b> Bowling	<b>20</b>
<b>21</b>	<b>22</b> Bowling	<b>23</b> Tennis	<b>24</b> Bowling	<b>25</b> Tennis	<b>26</b> Bowling	<b>27</b>
<b>28</b>	<b>29</b> Bowling	<b>30</b> Tennis	<b>31</b> Bowling			

11 Brenda plays tennis and goes bowling.

Which days of the week does Brenda play tennis?

- A Tuesday and Thursday
- B Monday and Friday
- C Monday and Wednesday

Use the figure below to answer question 12.

### Bus Schedule

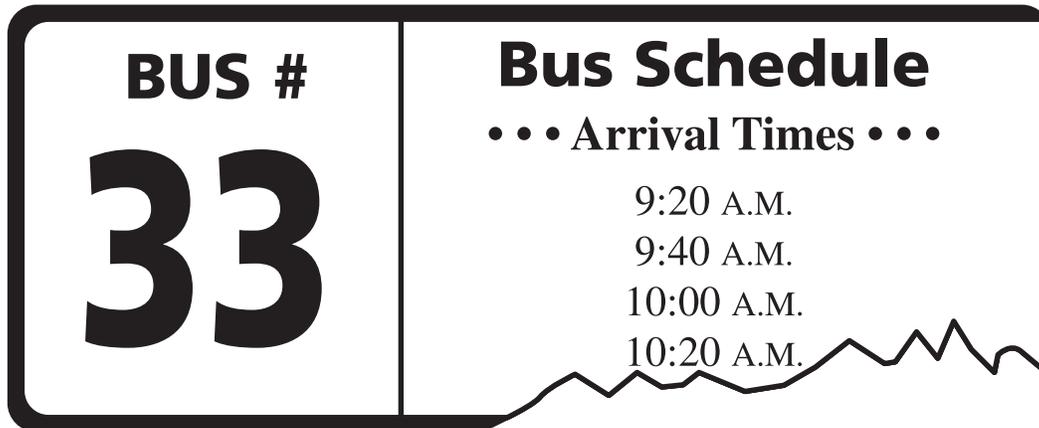
Street	Arrival Time
Tuna Street	7:00 A.M. 8:00 A.M. 8:30 A.M.
Salmon Street	7:10 A.M. 7:23 A.M. 7:36 A.M.
Cod Street	7:15 A.M. 7:25 A.M. 7:35 A.M.

12 It is 7:12 A.M.

At what time will the **next** bus arrive at Tuna Street?

- A 7:00 A.M.
- B 7:15 A.M.
- C 8:00 A.M.

Use the picture below to answer question 13.



13 Lucy's bus schedule was torn.

It is 10:30 A.M.

At what time will the **next** bus arrive if the pattern continues?

- A 10:30 A.M.
- B 10:33 A.M.
- C 10:40 A.M.

**14** Shona wants to change her \$20 bill for smaller bills.

Which combination equals \$20?

- A** three \$5 bills
- B** two \$10 bills
- C** twelve \$1 bills

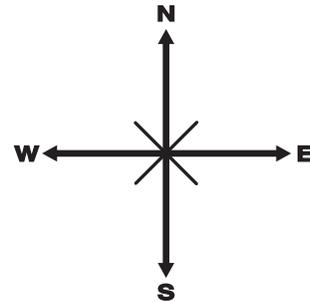
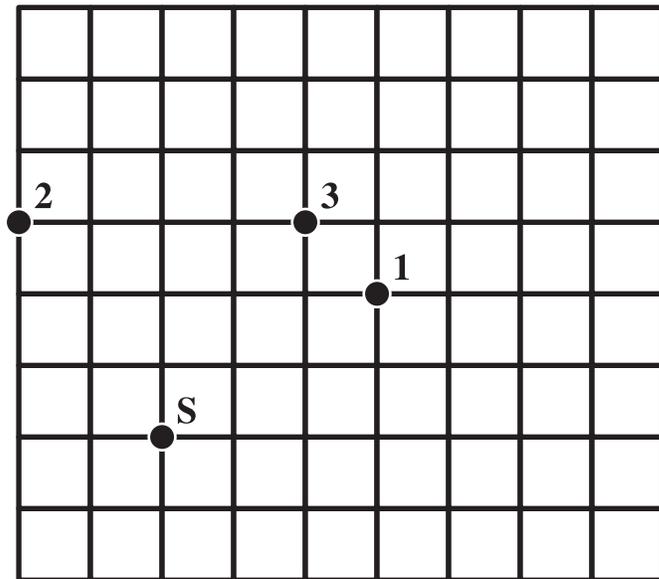
Use the figure below to answer question 15.



15 How much money is shown?

- A \$2.38
- B \$2.48
- C \$2.60

16 The grid below represents city blocks.



Scale: Each square is one block.

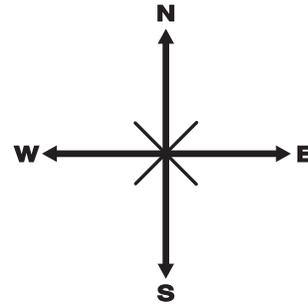
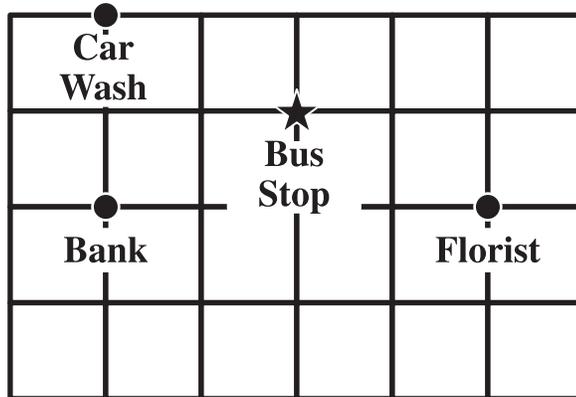
Sam is standing at Point S.

Sam walked 3 blocks north, then 2 blocks east.

Which point is Sam at then?

- A Point 1
- B Point 2
- C Point 3

17 The grid below represents city blocks.

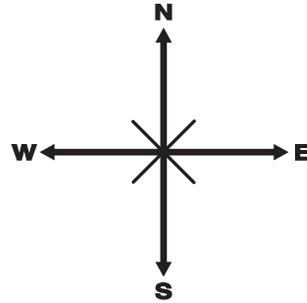
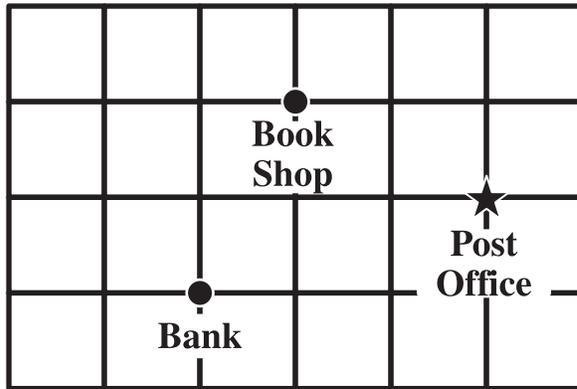


Scale: Each square is one block.

What is 2 blocks east and 1 block south of the bus stop?

- A Florist
- B Car Wash
- C Bank

18 The grid below represents city blocks.



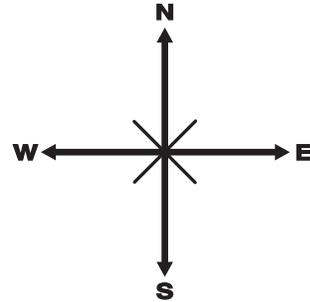
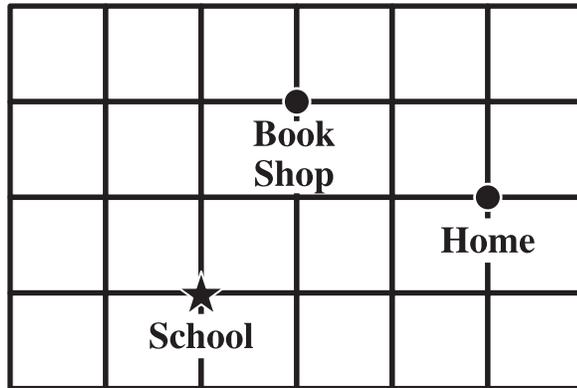
Scale: Each square is one block.

Jon is at the post office.

In which general direction will he go to get to the bank?

- A northwest
- B southwest
- C southeast

- 19 The grid below represents city blocks.



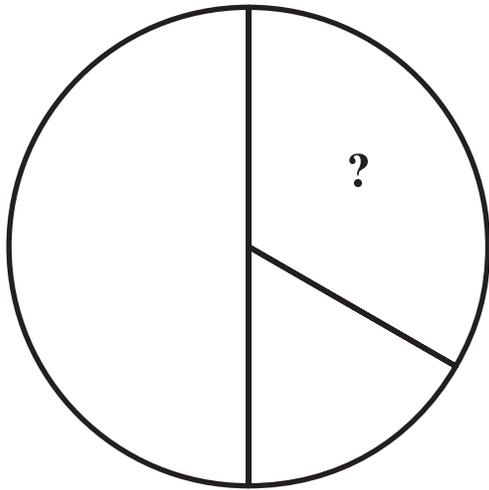
Scale: Each square is one block.

How can Theresa get from School to the Book Shop?

- A Go 3 blocks east, then 1 block north.
- B Go 2 blocks east, then 1 block north.
- C Go 1 block east, then 2 blocks north.

- 20 A circle graph was begun to show how the students traveled to class.

### Ways of Traveling to Class



Six students traveled to class by car.

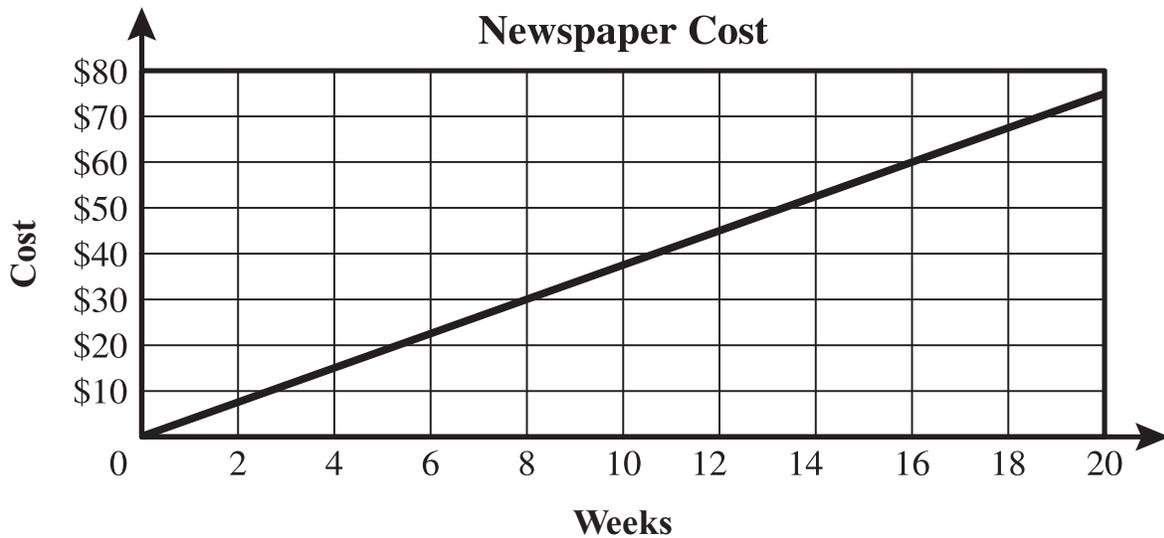
Two students walked to class.

Four students took the bus to class.

Which label belongs where the question mark is?

- A car
- B walk
- C bus

Use the graph below to answer question 21.



- 21 The cost of a newspaper depends on how many weeks you buy the newspaper.

How much does it cost to buy a newspaper for 12 weeks?

- A \$45
- B \$35
- C \$25

- 22 Mary is paid \$400 a month for her job.

She has set up the following budget for the month.

**Mary's Budget**

Car Payment	\$150
Car Insurance	\$50
Food	\$70
Savings	\$85
Entertainment	?

How much money does she have **left** for entertainment?

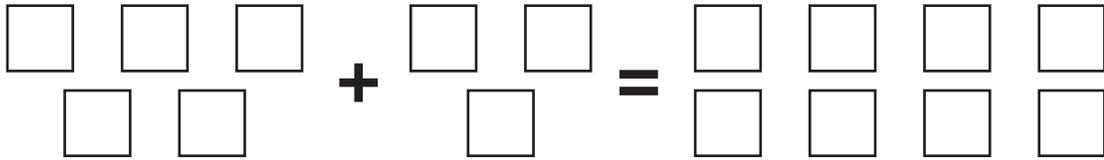
- A \$25
- B \$35
- C \$45

- 
- 23 Pam wants to know the average time her classmates spend riding the bus to school each morning.

Which question should she ask her classmates?

- A "How far do you ride the bus?"
- B "How long are you on the bus?"
- C "How many buses do you take?"

Use the figure below to answer question 24.



24 What does the figure above show?

A  $1 + 1 = 2$

B  $5 + 3 = 8$

C  $6 + 2 = 8$

---

25 Which of the following is read as “four thousand four?”

A 4,004

B 4,400

C 4,444

26 In the numeral 854, which digit is in the **tens** place?

A 4

B 5

C 8

---

27 In which list are the numbers in order from **least** to **greatest**?

A 5, 23, 145, 45

B 5, 18, 36, 205

C 200, 58, 40, 5

**28** Glen paid a sales tax of 6%.

Which of the following statements is true?

- A** Glen paid 6 cents in tax for every dollar he spent.
- B** Glen paid 60 cents in tax for every dollar he spent.
- C** Glen paid 6 cents in tax for every 10 dollars he spent.

---

**29** Which decimal is equal to  $\frac{1}{4}$ ?

- A** 0.14
- B** 0.25
- C** 0.40

**30** Which of the following is equal to 40%?

**A** 40

**B**  $\frac{1}{40}$

**C**  $\frac{40}{100}$

---

**31** A shop is having a 30% off sale.

What is the sale price of a \$24 item?

**A** \$7.20

**B** \$16.80

**C** \$23.70

32 Jennifer needs  $6\frac{3}{4}$  cups of flour for a recipe.

She only has  $4\frac{1}{4}$  cups of flour.

How many **more** cups of flour does she need?

A  $1\frac{1}{4}$  cups

B  $2\frac{2}{4}$  cups

C  $2\frac{3}{4}$  cups

---

33 Julie paid \$4.50 for her lunch, \$7.00 for her dinner, and \$3.65 for her dessert.

Which of the following is listed in order from **least** to **greatest**?

A \$7.00, \$3.65, \$4.50

B \$3.65, \$4.50, \$7.00

C \$4.50, \$3.65, \$7.00

- 34 Mark pays \$2.00 for every hour his car is parked in the garage.

How much will he pay for 4 hours of parking?

A \$4.00

B \$6.00

C \$8.00

- 
- 35 Debby went shopping.

She bought the following items:

1 loaf of bread for \$1.94

2 packages of lunch meat for \$1.99 each

1 gallon of milk for \$2.79.

**About** how much money did Debby spend?

A \$4.00

B \$6.00

C \$9.00

36 Sam had 50 sheets of paper.

He uses 23 sheets.

What operation would you use to find out the number of sheets he has **left**?

- A subtraction
  - B multiplication
  - C division
- 

37 Michael makes \$5 an hour.

Last week he worked 13 hours.

His boss gave him a \$20 bonus last week.

How much money did Michael make **in all** last week?

- A \$38
- B \$65
- C \$85

**38** Tia drove 500 miles in 10 hours.

What was her average speed in miles per hour?

**A** 40 miles per hour

**B** 50 miles per hour

**C** 60 miles per hour

---

**39** What number goes in the box to make the statement true?

$$\square + 7 = 121$$

**A** 114

**B** 121

**C** 128

40 Steve has  amount of money.

When his mother gives him \$23.00, he has a total of \$78.00.

Which equation represents this?

A  - \$23.00 = \$78.00

B  + \$23.00 = \$78.00

C  + \$78.00 = \$23.00

---

41 EMBEDDED ITEM

A

B

C

**42** EMBEDDED ITEM**A****B****C**

---

**43** EMBEDDED ITEM**A****B****C**

**44** EMBEDDED ITEM**A****B****C**

---

**45** EMBEDDED ITEM**A****B****C**

**46** EMBEDDED ITEM

**A**

**B**

**C**

---

**47** EMBEDDED ITEM

**A**

**B**

**C**

**48** EMBEDDED ITEM**A****B****C**

---

**49** EMBEDDED ITEM**A****B****C**

**50** EMBEDDED ITEM

**A**

**B**

**C**



**Do Not Continue.**

Below is a list of the Extended Benchmarks (EB) that each item in this sample booklet measures.

Because the assessment will be administered during the *spring* of the school year, only content from the *current* grade level will be measured on the assessment. Therefore, items eligible for the Grade 11 assessment will measure the Grade 11 EB.

The references to EB contained in this document can be found in the *Extended Benchmarks*, which are available for review and download at [www.mi.gov/mi-access](http://www.mi.gov/mi-access).

Item Number	Strand	Topic	EB
1	F	1	01
2	F	1	01
3	F	1	02
4	F	1	03
5	G	1	02
6	G	1	03
7	G	1	05
8	G	1	09
9	G	1	01
10	G	1	12
11	G	1	13
12	G	1	13
13	G	1	13
14	G	2	15
15	G	2	16
16	G	3	20
17	G	3	20
18	G	3	20
19	G	3	20
20	D	1	01
21	D	1	01
22	D	1	05
23	D	1	07
24	N	1	02
25	N	1	01
26	N	1	03

Item Number	Strand	Topic	EB
27	N	1	04
28	N	3	10
29	N	3	11
30	N	3	11
31	N	3	12
32	N	3	15
33	N	3	16
34	N	3	18
35	N	4	19
36	N	4	20
37	N	4	21
38	A	1	01
39	A	1	02
40	A	1	03
41	Embedded Placeholder		
42	Embedded Placeholder		
43	Embedded Placeholder		
44	Embedded Placeholder		
45	Embedded Placeholder		
46	Embedded Placeholder		
47	Embedded Placeholder		
48	Embedded Placeholder		
49	Embedded Placeholder		
50	Embedded Placeholder		



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Revised October 23, 2003