

Mathematics Performance Test

MILESTONE I

Grade 7

Student Name _____

Teacher Name _____

I.D.# _____



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Test Directions

The purpose of this test is to identify the areas in mathematics that you understand and the areas that need more work. **Do your best and answer all questions.** Use your time wisely by answering all questions you understand first. Then come back to complete more difficult problems. Be sure to place each answer in the correct place.

Make sure that your name and number match on your test booklet and your answer sheet.

This test has two parts – A and B. All answers for Part A will be marked on the bubble answer sheet that you have received. Be sure to darken each circle that you select and to erase completely if you change an answer or make an extra pencil mark on the answer sheet. Answers for Part B will be written in this test booklet.

Tools:

- You will receive a sheet of scrap paper for your calculations.
- A number 2 pencil.
- You may **NOT** use a calculator.

Part A

Part A includes 20 multiple-choice questions.

Part B

Part B includes written response questions.

Now locate the space for marking the answer to Question #1 as your teacher checks to see if you are ready. Your teacher will signal when you are to begin.

Part A

All answers for Part A will be marked on the Part A answer sheet that you have received. Be sure to darken each circle that you select and to erase completely if you change an answer or make an extra pencil mark on the answer form.
REMEMBER: DO NOT WRITE IN THE PART A TEST BOOKLET.

1. Which of the following are equivalent to $1\frac{5}{9}$?

A. $\frac{14}{9}$

B. $\frac{15}{9}$

C. 1.59

D. 1.95

2. Which fraction in **simplest form** is equivalent to 0.125?

A. $\frac{125}{1000}$

B. $\frac{1}{8}$

C. $\frac{1}{4}$

D. $12\frac{1}{2}$

3. Which of the following is a true inequality?

- A. $6.537 > 6.541$
- B. $9.97 > 11.269$
- C. $16.538 < 16.6$
- D. $41.739 < 40.999$

4. Order from least to greatest.

$\frac{7}{10}, \frac{4}{6}, \frac{11}{20}, \frac{1}{2}$

- A. $\frac{1}{2}, \frac{4}{6}, \frac{7}{10}, \frac{11}{20}$
- B. $\frac{1}{2}, \frac{11}{20}, \frac{4}{6}, \frac{7}{10}$
- C. $\frac{1}{2}, \frac{7}{10}, \frac{4}{6}, \frac{11}{20}$
- D. $\frac{4}{6}, \frac{1}{2}, \frac{7}{10}, \frac{11}{20}$

5. Order these numbers from least to greatest.

$-2, 1.5, \frac{7}{2}, -10, 10.2$

- A. $1.5, -2, 10.2, -10, \frac{7}{2}$
- B. $1.5, \frac{7}{2}, -2, -10, 10.2$
- C. $-2, \frac{7}{2}, -10, 10.2, 1.5$
- D. $-10, -2, 1.5, \frac{7}{2}, 10.2$

6. What is the sum?

$$-4.3 + 2.4$$

- A. -6.7
- B. -1.9
- C. 1.9
- D. 6.7

7. What is the difference?

$$-5.7 - (-2.6)$$

- A. -8.3
- B. -5.44
- C. -3.1
- D. 2.03

8. What is the product?

$$(-7.1) \cdot (3.75)$$

- A. -26.625
- B. -21.75
- C. 21.75
- D. 26.625

9. Evaluate. $(0.003)(0.4)$

- A. 0.00012
- B. 0.0012
- C. 0.012
- D. 0.12

10. Evaluate.

$$\left(\frac{1}{2}\right)^4$$

- A. $\frac{1}{16}$
- B. $\frac{1}{8}$
- C. $\frac{4}{16}$
- D. $\frac{4}{8}$

11. Evaluate.

$$(-3)^2$$

- A. -9
- B. -6
- C. 6
- D. 9

12. Evaluate.

$$(-0.2)^2 + (0.1)^3$$

- A. -0.1
- B. -0.039
- C. 0.041
- D. 0.3

13. What property is represented by the equation?

$$(3 + 4) + 5 = 3 + (4 + 5)$$

- A. Distributive property
- B. Associative property of addition
- C. Order of operations
- D. Commutative property of addition

14. Which operations can you apply the commutative property?

- A. Addition & Subtraction
- B. Subtraction & Division
- C. Addition & Multiplication
- D. Multiplication & Division

15. What is the product?

$$-3.5 \cdot 2.3$$

- A. -8.05
- B. -1.2
- C. 1.2
- D. 8.05

16. What is the difference?

$$\frac{1}{3} - \left(-\frac{1}{2}\right)$$

- A. $-\frac{1}{6}$
- B. $\frac{1}{6}$
- C. $\frac{1}{5}$
- D. $\frac{5}{6}$

17. What is the sum?

$$6.1 + (-3.2)$$

- A. -19.52
- B. -9.3
- C. 2.9
- D. 9.3

Use the following math test grades to answer questions 18 – 20.

MATH TEST GRADES	
TEST	GRADES
1	100
2	80
3	92
4	91
5	73
6	91
7	80
8	78
9	80

18. What is the median test grade?

- A. 73
- B. 80
- C. 85
- D. 91

19. What is the mode?

- A. 80
- B. 85
- C. 91
- D. 100

20. What is the range?

- A. 9
- B. 20
- C. 27
- D. 37

**Mathematics
Milestone I**

Grade 7 - Part B

Name _____
Teacher _____
School _____

Directions: Write all your answers for Part B on these question sheets.

21. Complete the table for the missing numbers.

	Fraction	Decimal	Percent
Row 1	$\frac{7}{8} =$	$=$	
Row 2	$=$	$.60 =$	

22. Use what you know about equivalent fractions, decimals and percents to explain how you found the missing numbers in row 1. Use words, numbers and/or symbols in your explanation.

23. Use the home run leaders data to create a double stem and leaf plot to compare the home run performance of the American and National Leagues.

HOME RUN LEADERS (1991-1999)					
Year	National League	Homerun		American League	Homerun
1991	Howard Johnson	38		Jose Canseco	44
1992	Fred McGriff	35		Juan Gonzales	43
1993	Barry Bonds	46		Juan Gonzales	46
1994	Matt Williams	43		Ken Griffey Jr.	40
1995	Dante Bichette	40		Albert Belle	50
1996	Andre Galarraga	47		Mark McGwire	52
1997	Larry Walker	49		Ken Griffey Jr.	56
1998	Mark McGwire	70		Ken Griffey Jr.	56
1999	Mark McGwire	65		Ken Griffey Jr.	48

24. What is the median number of home runs for the National League and for the American League?

Median

Mean

Mode

National League is _____

American League is _____

25. Explain how you determined the medians for the double stem and leaf plot? Use math words, numbers and/or symbols in your explanation.

Patricia measured the monthly rainfall in inches during a 6 month period. The rainfall for each month was 2.8, 29.7, 34.10, 30.9, 7.5 and 3.6.

26. Estimate the total amount of rainfall over the six month period.

27. Explain how you estimated the total rainfall. Use what you know about estimating in your explanation. Use words, numbers and/or symbols in your explanation.

Grade 7 Milestone I Exemplary Response

6.A.1

1. A
2. B
3. C
4. B
5. D

6.C.1

6. B
7. C
8. A
9. B
10. A
11. D
12. C
13. B
14. C

6.C

15. A
16. D
17. C

4.A/B

18. B
19. A
20. C

**Grade 7 Milestone I
Exemplary Response**

6.A.1
21.

Fraction	Decimal	Percent
$\frac{7}{8}$.875	87.5%
$\frac{3}{5}$.60	60%

Scoring Tool #21:

- 2 Points – All four answer are correct.
- 1 Point – At least two answers are correct.
- 0 Points – Incorrect response.

7C

22. Row 1: I divided 7 by 8 to get my decimal of .875. To change the decimal to a percent I moved the decimal point two places to the right and wrote 87.5% .

Scoring Tool #22:

- 2 Points – Correctly describes both processes (division and movement of the decimal).
- 1 Point – Correctly describes either process.
- 0 Points – Incorrect response.

Grade 7 Milestone I Exemplary Response

4.A/B
23.

National		American
8 5	3	
9 7 6 3 0	4	0 3 4 6 8
	5	0 2 6 6
5	6	
0	7	

Key : 4|3 = 34 homeruns

Scoring Tool #23:

- 3 Points – Correct double stem and leaf with key.
- 2 Points – Correct double stem and leaf with no key or labels of leaves.
- 1 Point – Correct stem and leaf for either the National or American maybe missing key.
- 0 Points – Incorrect response.

4.A/B		Median	Mean	Mode
24.	National League is	46	48.1	None
	American League is	48	48.3	56

Scoring Tool #24:

- 2 Points – All medians and modes correct.
- 1 Point – Two correct answers.
- 0 Points – Incorrect response.

7A

25. I put the National League numbers in order from smallest to largest 35, 38, 40, 43, 46, 47, 49, 65, 70. Since there are 9 numbers the median is the number in the middle (fifth) the median is 46. I did the same for the American League I listed them from smallest to largest 40, 43, 44, 46, 48, 50, 52, 56, 56. Since there are 9 numbers the median is the number in the middle (fifth) so the median is 48.

Scoring Tool #25:

- 2 Points – Correct response includes placing the numbers in order and that the median is the number in the middle. Since there is 9 the number in the middle is the 5th data.
- 1 Point – Describes placing numbers in order OR describes the process of finding the number in the middle.
- 0 Points – Incorrect response.

Grade 7 Milestone I Exemplary Response

1.B.1

26. 110 inches (1 Point)

7A

27. I rounded each number to the nearest whole number. Any tenths 5 or more I rounded up to the next larger whole number. 2.8 to 3, 29.7 to 30, 34.10 to 34, 30.9 to 31, 7.5 to 8, 3.6 to 4, then I added to get 110.

Scoring Tool #27:

2 Points – Completely correct answer includes the strategy (rounded) and the explanation that includes a description of the rounding to the nearest ten or nearest whole number and then added (110).

1 Points – Partially correct answer includes the strategy (rounded) supported by a partial explanation.

0 Points – Incorrect response