COBB MATH

Grade 5 Mathematics
Unit 1: Order of Operations and Whole Numbers
Study Guide

Name Key Date

Section 1: Proficiency of Skills (Selected Response)

1) What is the value of the expression? PEMDAS

6 + 8 ÷ (4 + 4) x 6

6+8÷8×6 6+1×6 6+6

a. 13 b. 40 c. 12 d. 45

MGSE5.OA.1

2) Which expression matches the statement:

subtract the sum of 4 and 6 from 32

10 - 32

a. (4 + 6) – 32 b. (32 – 4) +6

c. (32 + 4) – 6 d. 32 – (4 + 6)

MGSE5.OA.2

3) How does **5 + (12 ÷ 4)** compare to **(12 ÷ 4)**? 8 3

a. 5 + (12 ÷ 4) is 5 times greater than (12 ÷ 4)

b. 5 + (12 ÷ 4) is 5 more than (12 ÷ 4)

c. 5 + (12 ÷ 4) is 5 less than (12 ÷ 4)

d. 5 + (12 ÷ 4) is equal to (12 ÷ 4)

MGSE5.OA.2

4) The value of the 5 in the ones place is _____ the value of the 5 in the thousands place.

165,375

a. 1,000 times b. 100 times c. $\frac{1}{10}$ d. $\frac{1}{1,000}$

MGSE5.NBT.1

5) Find the product:

285 x 14 = ☐

285 × 14 = 1140 + 2850 = 3990

a. 1,965 b. 9,390 c. 19,645 d. 8,238

MGSE5.NBT.5

6) The value of the digit in the hundreds place is _____ the value of the digit in the tens place.

662

a. 10 times b. 100 times c. $\frac{1}{10}$ d. $\frac{1}{100}$

MGSE5.NBT.1

7) Find the quotient:

1,350 ÷ 15 = ☐

15 | 1350 | 90 − 1350 = 0

a. 90 b. 190 c. 9 d. 150

MGSE5.NBT.6

8) Jake writes this expression in his math journal. How can Jake write this expression using an exponent?

10 x 10 x 10 x 10

a. 10^1 b. 10^4 c. 10^5 d. 10^2

MGSE5.NBT.2

5/6/20

Section 1: Proficiency of Skills (Constructed Response)

9) Evaluate the expression: PEMDAS

$(10 + 4) \div 4 + 5 \times 5$

$14 \div 4 + 5 \times 5$

$3 + 5 \times 5$

$3 + 25 = 28$

MGSE5.OA.1

10) Write an expression that matches the statement:

Add three and seven and then divide by 2

Expression: $(3+7) \div 2$

MGSE5.OA.2

11) A donut store sold 1,476 donuts last Saturday. They sold all of those donuts in dozen sized boxes. A dozen is equal to 12. How many dozen did they sell?

12 | 1,476	100
−1200	
276	20
−240	
36	3
−36	
0	123

The farmer will have 123 cartons of eggs.

MGSE5.NBT.6

12) Wes writes the number 100,000 on his paper. Sean writes the number 968,012 on his paper. How does the value of the digit 1 in Aaron's number compare to the digit 1 in John's number?

Wes	Sean
100,000	968,012

The value of the digit 1 in Aaron's number is 1 the value of the digit 1 in John's number.

10,000

MGSE5.NBT.1

13) Solve:

$23 \times 10^4 = 230,000$

MGSE5.NBT.2

14) Find the quotient:

$8,412 \div 24 = $ _____

24 | 8412	300
−7200	
1212	50
−1200	
12	0.5

350 r. 12

MGSE5.NBT.6

15) Find the product:

$965 \times 37 = $ _____

35,705

965 × 37

6755

+ 28950

MGSE5.NBT.5

16) Solve:

$240 \times 10^3 = 240,000$

MGSE5.NBT.2

5/6/2016

Section 2: Knowledge and Understanding

17) Write a numerical expression that matches each phrase:

Phrase	Numerical Expression
Multiply 6 and 7, and then add 8	6x7 + 8 | 8 + 6x7
Subtract 4 from 28, and then divide by 6	(28-4)÷6

MGSE5.OA.

18) Liliana tried to solve 9,287 ÷ 32 using partial quotients. She started with what you see below. Finish solving the problem for her. What is the quotient and remainder of Liliana's problem? Explain your thinking.

32) 9,287
- 3,200 | 100

5087
-3200 | 100
2887
-1280 | 40
1607
-1280 | 40
327 | 10
-320
7

What is Liliana's final answer?

32
x 4
128

290 r. 7

19) John made a mistake when finding the product of a multiplication problem on his math test. Explain what John did incorrectly.

224
X 18
1792
224
2016

Explanation: He didn't save the ones place

MGSE5.NBT.5

20) Add parentheses to make the equation true:

13 + 8 ÷ 3

(3 + 10 + 8) ÷ 3 = 7
21 ÷ 3 = 7

3 + 18 ÷ 3
3 + 6 = 9

MGSE5.OA.1

21) Explain how the expression 3 (10 x 10) compares to 10 x 10.

Explanation: 300 100

3 times larger than

MGSE5.OA.2

22) What exponent belongs in the box to make the equation true?

$51 \times 10^{\boxed{3}} = 51{,}000$

5/6/2016

23) Maya writes the number 34,841 on her paper. She says the value of the 4 in the tens place is 100 times greater than the value of the 4 in the thousands place. Is Maya's statement correct? Explain your reasoning.

Explanation: 34841 $\frac{1}{100}$ the size

MGSE5.NBT.1

Section 3: Application

24) Melissa and her family are traveling for 10 days on vacation. On Monday, they drove $\frac{1}{10}$ of their total distance. If Melissa's family drove 125 miles on Monday, how many total miles did they drive over the course of the entire trip?

125 x 10 = 1,250 miles

125

$\frac{1}{10}$	125	125	125	125	125				

Melissa's family drove a total of _____ miles on vacation.

MGSE5.NBT.1

25)

$200 \times 10^2 =$ 20,000

MGSE5.NBT.2

26) A container holds 4,112 ounces of juice. A restaurant places the juice into 36-ounce bottles. How many **FULL** bottles of juice can the restaurant produce?

36 | 4,112 | 100
- 3,600 | 10
512
- 360 | 4
152
- 144

114 full bottles

MGSE5.NBT.6

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27) Sheila is baking cookies for the bake sale. Yesterday, Sheila baked 50 chocolate chip cookies. Today, she made 2 times the amount of chocolate chip cookies that she made yesterday.
Find the **total** number of chocolate chip cookies that Sheila made.

$$110 + 50$$

160 cookies

$$\begin{array}{r} 1\,50 \\ \times\ 2 \\ \hline 110 \end{array}$$

MGSE5.NBT.5

28) A farmer sells 10 large watermelons for $4 each. He divides the total amount of money earned from the watermelons with his partner. Write and evaluate a numerical expression that shows the amount of money that the farmer and his partner each received.

$$10 \times 4 \div 2$$

$$40 \div 2 = 20$$

The farmer and his partner each received $ 20.

MGSE5.OA.1, 2

29) Compare the two expressions. Explain how the value of the expressions differ because of the grouping symbols.

7 x 4 + 9

7 x (4 + 9)

Explanation: They differ because in the 1st one you multiply 7 & 4 than add 9 in the 2nd one you add 4 & 9 than multiply 7. So, the 2nd one will be larger amount.

MGSE5.OA.1

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Section 4: Performance Task

30) Mr. Williams is planning a field trip to the zoo for a group of students. The cost of the trip is $20 per student. The table shows the number of students planning to attend the field trip.

PART A

Complete the table by calculating the cost for students at each grade level.

Grade Level	Number of Students	Cost $20 for each student
Third-Grade Students	149	$2,980
Fourth-Grade Students	134	$2,680
Fifth-Grade Students	+ 102	+ 2,040
TOTALS	**TOTAL NUMBER OF STUDENTS** 385	**TOTAL COST** $7,700

3rd grade
149
x 20
2,980

4th grade
134
x 20
2,680

5th grade
102
x 20
2040

PART B

Mr. Williams is requesting parent chaperones for the trip. He plans to assign one chaperone per group of students. If Mr. Williams places the total amount of students in groups of 5, how many chaperones will he need for the trip? Show your work.

77 chaperones

5 | 385 | 70
-350
35
-35
0 | 7

PART C

While at the zoo, a student learns that an elephant eats about 350 pounds of food per day. If the zoo has 5 elephants, how many total pounds of food are Eaten each day?

$^{2}350$
x 5
1750

1,750 lbs of food

PART D

One of the elephants weighs 12×10^2 pounds. Write the weight of the elephant in standard form. 1,200 pounds