

MATH TEST FRIDAY, SEPTEMBER 27, 2013

On Friday, September 27, 2103 we will have a Math Test. This test will assess these skills: Multiplicative Comparisons (equations), Factors, Multiples, and Multistep Problems. We've been learning and practicing these skills since the week of August 26th. Below, I have included the standard with an example. On the back of this page is a "study guide" for you to review with your child tonight, Wednesday, and Thursday nights. Please, let me know if you have any questions. – Mrs. West

Multiplicative Comparisons (equations):

MCC.4.OA.1 Interpret a multiplication equation as a comparison, e.g., interpret $35 = 5 \times 7$ as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.

A *multiplicative comparison* is a situation in which one quantity is multiplied by a specified number to get another quantity (e.g., "*a* is *n* times as much as *b*"). Students should be able to identify and verbalize which quantity is being multiplied and which number tells how many times.

Students should be given opportunities to write and identify equations and statements for multiplicative comparisons.

Examples:

$5 \times 8 = 40$: Sally is five years old. Her mom is eight times older. How old is Sally's Mom?

$5 \times 5 = 25$: Sally has five times as many pencils as Mary. If Sally has 5 pencils, how many does Mary have?

Multi-Step Problems:

MCC.4.OA.3 Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.

Examples:

(1) On a vacation, your family travels 267 miles on the first day, 194 miles on the second day and 34 miles on the third day. How many miles did they travel total? $267 + 194 + 34 = 495$ miles

(2) Harry had 10 Science homework problems and 25 Math homework problems. If he finished 16 problems at school, how many problems did he have to do for homework? $10 + 25 - 16 = 19$ problems for homework

Factors and Multiples:

MCC.4.OA.4 Find all factor pairs for a whole number in the range 1–100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1–100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1–100 is prime or composite.

This standard requires students to demonstrate understanding of factors and multiples of whole numbers. This standard also refers to prime and composite numbers. **Prime numbers have exactly two factors, the number one and their own number.** For example, the number 17 has the factors of 1 and 17. **Composite numbers have more than two factors.** For example, 8 has the factors 1, 2, 4, and 8.

Multiples can be thought of as the result of skip counting.

Examples:

Factors of 24: 1, 2, 3, 4, 6, 8, 12, 24

Multiples:

Of 2: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24

Of 3: 3, 6, 9, 12, 15, 18, 21, 24

Of 4: 4, 8, 12, 16, 20, 24

Of 8: 8, 16, 24....

Of 12: 12, 24

PLEASE SIGN AND RETURN: _____

STUDY GUIDE:

Multiplicative Comparisons (equations):

1) An industrial machine made sixteen shirts. If it takes eight minutes to make each shirt, how many minutes was it working?

- A. $16 + 8$
- B. $16 - 8$
- C. 16×8
- D. $16 \div 8$

2) A delivery driver had to make six more stops on his route. At each stop he had to drop off seven boxes. How many boxes does he have?

- A. $6 + 7$
- B. $6 - 7$
- C. 6×7
- D. $6 \div 7$

3) Amy bought six music albums online. If each album had five songs, how many songs did she buy total?

- A. $6 + 5$
- B. $6 - 5$
- C. 6×5
- D. $6 \div 5$

4) For the new school year Nancy's mom bought fifteen glue sticks. If each class needs three glue sticks, how many classes does Nancy have?

- A. $15 + 3$
- B. $15 - 3$
- C. 15×3
- D. $15 \div 3$

5) Isaac played six games of basketball with his friends. If Isaac scored five points each game, how many points did he score total?

6) Amy bought five pencils at the school store, but she already had six pencils. How many pencils does she have total?

Multi-Step Problems:

1) At the schools book fair Jerry bought twenty-five adventure books and twelve mystery books. If twenty of the books were used, how many new books did he buy?

2) While shopping, Janet bought thirty-seven green towels and fifteen white towels. If she gave her mother forty-two of them, how many towels did Janet end up with?

3) Carol and her mom were picking carrots from their garden. Carol picked four and her mother picked forty-six. If only sixteen of the carrots were good, how many bad carrots did they have?

4) Sam had to wash eight short sleeve shirts and forty-nine long sleeve shirts before school. If he had only washed thirty-five of them by the time school started, how many did he not wash?

Factors and Multiples:

1) List the factors of 72:

2) List the factors of 24:

3) Which number below is a factor of 12?

- A. 10
- B. 7
- C. 5
- D. 6

4) Which number below is **not** a factor of 8?

- A. 3
- B. 2
- C. 1
- D. 8

5) Which number below is a factor of 16?

- A. 7
- B. 2
- C. 6
- D. 3

6) List the first five multiples of 9

7) List the first five multiples of 7

8) Which number is a factor of 24 but not a multiple of 6?

- A. 7
- B. 8
- C. 10
- D. 12

9) Which number is a factor of 20 but not a multiple of 5?

- A. 4
- B. 6
- C. 8
- D. 10

10) Which number is a factor of 12 but not a multiple of 3?

- A. 4
- B. 6
- C. 8
- D. 9