

Name _____

Hour _____

LCM and GCF Quiz

Please solve each question and show your work. Make sure that your answer is in WORDS and answers the question being asked.

1. There are two semi trucks that come past my house. The first one comes past every 80 minutes and the other truck comes past every 120 minutes. If they both pass my house right now, how many minutes will it be before they pass my house again at the same time?

2. It is my birthday and I am trying to hand out goody bags to my guests. I can hand out 22 toys and 12 King size candy bars. What is the greatest number of goody bags I can make so that every bag has the same amount and nothing is left over? Then tell how many toys and candy bars will be in each goody bag.

3. Mr. Roska runs around a track in 30 seconds and I can run around the track in 40 seconds. If we both start at the same time how many seconds will it be until we are both cross the starting line together?

4. A teacher wants to hand out 24 pens and 48 postcards to her students. What is the greatest number of students she can have in her class so that everyone gets an equal amount and there are none left over? Also, tell how many pens and postcards each person will get.

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Factors and Multiples Study Guide

Check the following items when you are confident you can answer yes to the question.

___ Can I list all of the factors of a number like 45?

___ Can I list at least ten multiples of a number like 15?

___ Can I tell if a number is a factor of another number?
Example- Is 4 a factor of 72?

___ Can I tell if a number is a multiple of a number?
Example- Is 34 a multiple of 6?

___ Can I tell how many factors a number has?
Example- How many factors does 24 have?

___ Can I find the greatest common factor (GCF) of two numbers?
Example- What is the GCF of 20 and 45?

___ Can I find the lowest common multiple (LCM) of a number?
Example- What is the LCM of 30 and 45?

___ Do I know what happens when I add or multiply even and odd numbers?
Example- Is the answer of an odd plus an odd even or odd?

___ Do I know how to find the prime factorization of a number using a factor tree?

___ Can I find the number that a prime factorization equals?
Example- $2 \times 3 \times 3 \times 5 = ?$

___ Can I use exponents to write prime factorization strings?
Example- $2 \times 2 \times 2 \times 3 \times 3 = 2^3 \times 3^2$

___ Do I know what prime and composite numbers are?

___ Can I find the answer to a ferris wheel (LCM) style problem?

Example- There are two semi trucks that come past my house. The first one comes past every 50 minutes and the other truck comes past every 60 minutes. If they both pass my house right now, how many minutes will it be before they pass my house again at the same time?

___ Can I find the answer to a snack pack (GCF) style problem?

Example- A teacher wants to hand out 30 pens and 45 postcards to her students. What is the greatest number of students she can have in her class so that everyone gets an equal amount and there are none left over? Also, tell how many pens and postcards each person will get.

If you can do all these tasks you are ready for our test!!!!



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Unit Test

PART 1

Directions: Do all your work on these pages.

1. What is the greatest common factor of 16 and 28?
A. 2 B. 3 C. 4 D. 112

2. Which number is a factor of 44?
A. 8 B. 11 C. 14 D. 24

3. Which number is a multiple of 15?
A. 1 B. 5 C. 10 D. 30

4. How many different factors does 20 have?
A. 2 B. 3 C. 4 D. 6

5. Which number is a common multiple of 7 and 4?
- A. 11 B. 24 C. 48 D. 56
6. What is the prime factorization of 160?
- A. $1 \times 2 \times 2 \times 2 \times 2 \times 2 \times 5$
B. $2 \times 2 \times 2 \times 10$
C. $2^4 \times 5$
D. $2 \times 2 \times 2 \times 2 \times 2 \times 5$
7. Which answer is *always* odd?
- A. odd $\times$ odd
B. odd $+$ odd
C. even $\times$ odd
D. even $+$ even
8. Which string of factors is **not** a factorization of 180?
- A. $2 \times 3 \times 10 \times 3$
B. $2^3 \times 3^2 \times 5$
C. $2^2 \times 3 \times 3 \times 5$
D. $2 \times 15 \times 6$
9. Which number is composite?
- A. 52 B. 23 C. 67 D. 43
10. Which number is prime?
- A. 53 B. 56 C. 57 D. 51

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Part 2:

Directions: Mark all your answers ON THIS PAGE.

11. John and Janet are distributing erasers and pencils to the art class. There are 40 erasers and 25 pencils. Each student receives the same number of pencils and the same number of erasers, and no supplies are left over. What is the greatest number of students in the class?

ANSWER: _____

12. The Brown family has a family reunion at Central Park on July 4th every 5 years. The Smith family has a reunion the same day and place every 3 years. This year (2006) both families were at the park celebrating. What year will the two families be together again?

ANSWER: _____

13. List the first ten multiples of the following numbers:

A. 12:

B. 16:

14. Find the least common multiple of 12 and 16.

ANSWER: LCM = _____

15. What number has the prime factorization $2^2 \times 3^3 \times 5$?

ANSWER: _____

IDENTIFYING MY STRENGTHS AND AREAS FOR IMPROVEMENT

Name:

Assignment:

Date:

Please look at your test and mark whether each problem is right or wrong. Then look at the problems you got incorrect and write an explanation of why you got that question wrong.

Problem	Learning Objective	Right?	Wrong?	Why did I get this problem wrong?
1	Find the Greatest Common Factor			
2	Find factors of a number			
3	Find multiples of a number			
4	Find factors of a number			
5	Find the Least Common Multiple			
6	Find the prime factorization of a number			
7	Explain relationships between even and odd numbers			
8	Find the prime factorization of a number			
9	Recognize composite numbers			
10	Recognize prime numbers			
11	Use Greatest Common Factors to solve a problem			
12	Use Least Common Multiple to solve a problem			
13	Find the multiples of a number			
14	Find the Least Common Multiple			
15	Use the prime factorization of a number			