Name _____ Date _____

Greatest Common Factor and Least Common Multiple: GCF and LCM in Numbers and Word Problems

Directions: A factor of a number divides it with no remainder. A multiple of a number is that number times 1, 2, 3 or another counting number. A common factor is a factor of both numbers in a pair, and a common multiple is a multiple of both.

1. What is the greatest common factor of 18 and 24?

_____

2. What is the least common multiple of 6 and 8?

_____

3. Which list shows all the common factors of 20 and 30?

A. 2, 5, 10
B. 60, 120, 180
C. 1, 2, 5, 10
D. 1, 2, 4, 5, 10, 20

4. Find the greatest common factor of 54 and 90.

_____

5. Two students find the least common multiple of 4 and 10.

- Farah multiplies 4×10 and says the least common multiple is 40.
- Kenji lists the multiples of 10. He stops at 20, because 20 is also a multiple of 4.

Whose least common multiple is correct, and why?

A. Both, because 20 and 40 are both common multiples of 4 and 10.
B. Neither, because the least common multiple of 4 and 10 is 2.
C. Kenji's, because 20 is the smallest number that is a multiple of both 4 and 10.
D. Farah's, because the least common multiple of two numbers is always their product.

6. A green bus leaves the station every 9 minutes, and a blue bus leaves every 12 minutes. Both buses leave together at 8:00. How many minutes after 8:00 will they next leave together?

_____ minutes

7. Marco packs 32 pencils and 48 erasers into party bags. Every bag gets the same number of pencils and the same number of erasers, and nothing is left over. What is the greatest number of bags he can pack?

_____ bags

8. Which expression writes $28 + 42$ as the greatest common factor of 28 and 42 times a sum?

A. $7 \times (4 + 6)$ B. $14 \times (2 + 42)$ C. $14 \times (2 + 3)$ D. $2 \times (14 + 21)$

9. Complete the equation. Use the greatest common factor of 45 and 75 as the number outside the parentheses.

$45 + 75 =$ _____ $\times (3 +$ _____$)$

10. Which pairs of numbers have a greatest common factor of 6? Select the two pairs.

☐ A. 24 and 36 ☐ B. 12 and 18 ☐ C. 18 and 27

☐ D. 6 and 16 ☐ E. 30 and 42