

Chapter 2 — Factors, Multiples, Primes, and Divisibility

Worksheet C: Mixed Application

Name: _____ Grade: _____ Date: _____

1. A student lists 8, 16, 24 as the factors of 8. Explain the mistake.

2. A student says 39 is prime because it is odd. Explain the mistake.

3. You have 36 rulers and 54 protractors. What is the greatest number of identical kits you can make using all of them?

4. Two lighthouses flashing every 12 minutes and 16 minutes. If they start together, how many minutes until they do it together again?

5. Pack 60 muffins and 75 cookies into identical trays with nothing left over. What is the greatest number of trays you can make?

6. Is 8232 divisible by 6? Explain using divisibility rules.

7. Is 5481 divisible by 9? Explain using divisibility rules.

8. Give an example of an odd composite number and explain why it is composite.

9. Give an example of a two-digit prime number and explain why it is prime.

10. Find the GCF and LCM of 16 and 24.

11. Is the GCF always smaller than both numbers? Explain using 21 and 28 as an example.

12. Is the LCM always the product of the two numbers? Explain using 8 and 12 as an example.

- 13.** Pack 84 granola bars and 108 juice boxes into identical snack packs with nothing left over. Greatest number of snack packs?
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- 14.** Two buses leaving the depot every 15 and 20 minutes. When will they next happen at the same time?
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- 15.** Explain why 0 is a multiple of 11 but not a factor of 11.