

1.4 Practice A

Use divisibility rules to determine whether the number is divisible by 2, 3, 5, 6, 9, and 10. Use calculator to check your answers.

1. 1200
2. 1515
3. 1071
4. A baseball camp is held at a complex that has 6 baseball diamonds. The coaches would like each diamond to have the same number of campers. Use divisibility rules to determine whether this is possible if 152 kids show up for the camp.

List the factor pairs of the number.

5. 14
6. 26
7. 51
8. 18
9. 36
10. 47

Write the prime factorization of the number.

11. 9
12. 49
13. 28
14. 50
15. 66
16. 38

Find the number represented by the prime factorization.

17. $2^2 \cdot 5^2 \cdot 7$
18. $2^2 \cdot 3^2 \cdot 11$

Write the prime factorization of the number.

19. 144
20. 243
21. 475
22. A teacher divides the students into three groups for a project. Each group has the same number of students. Is the total number of students *prime* or *composite*? Explain.
23. The glee club has 120 cupcakes to sell. They have decided to arrange the cupcakes in the shape of a rectangle, such that the rows have an even number of cupcakes and the columns have an odd number of cupcakes. How many arrangements of cupcakes can they create? Explain.
24. Find composite numbers that have the following characteristics:
 - a. A number greater than 40 whose prime factorization contains 3 prime numbers that do not repeat.
 - b. A number greater than 1000 whose prime factorization contains 1 prime number that does not repeat, 1 prime number that repeats 3 times, and 1 prime number that repeats twice.