Name_____ Date_____

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.

Name_____ Date_____

1.5 Practice A

Use a Venn diagram to find the greatest common factor of the numbers.

1. 10, 35 **2.** 18, 42 **3.** 48, 120

Find the GCF of the numbers using lists of factors.

4. 8, 12 **5.** 22, 121 **6.** 50, 90

7. 34, 119 **8.** 32, 45 **9.** 18, 42

Find the GCF of the numbers using prime factorizations.

10. 36, 60 **11.** 45, 75 **12.** 54, 126

13. 78, 117 **14.** 42, 63 **15.** 53, 86

16. A high school swim team has 12 new female swimmers and 30 returning female swimmers. Each practice team must have the same number of new and returning female swimmers.

a. What is the greatest number of practice teams the coach can make using every swimmer?

b. How many new and returning female students will be on each practice team?

Find the GCF of the numbers.

17. 27, 45, 63 **18.** 20, 36, 72 **19.** 24, 40, 64

20. Write a set of three numbers that have a GCF of 13.

Tell whether the statement is *always*, *sometimes*, or *never* true.

21. The GCF of two numbers is a composite number.

22. The GCF of two numbers is equal to the lesser of the numbers.

23. You have three numbers.

a. Two of the numbers are 24 and 42. What is the GCF of these two numbers?

b. The third number is greater than 42 and does not change the GCF. What is one possibility for the third number?

Name_____ Date_____

1.6 Practice A

Use a Venn diagram to find the least common multiple of the numbers.

1. 2, 3 **2.** 4, 10 **3.** 6, 9

Find the LCM of the numbers using lists of multiples.

4. 3, 5 **5.** 7, 8 **6.** 4, 6

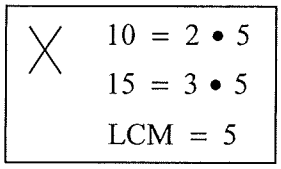
7. 2, 7 **8.** 14, 21 **9.** 16, 24

Find the LCM of the numbers using prime factorizations.

10. 10, 12 **11.** 18, 30 **12.** 26, 39

13. 32, 48 **14.** 25, 40 **15.** 21, 56

16. Describe and correct the error in finding the LCM.



17. You have piano lessons every 7 days and tuba lessons every 3 days. Today you have both lessons.

a. In how many days will you have both lessons on the same day again?

b. Not counting today or the day when you have the same lesson again, how many piano lessons will you have in between? How many tuba lessons will you have in between?

Find the LCM of the numbers.

18. 3, 5, 7 **19.** 2, 3, 11 **20.** 6, 8, 12

21. The snooze button on your alarm clock activates the alarm every 5 minutes. The snooze button on your cell phone activates the alarm every 7 minutes. Both alarms activate at 7:00 A.M. You hit each snooze button as each alarm activates. At what time are both alarms activated again?

Name _____ Date _____

Extension 1.6 Practice

Use the LCD to rewrite the fractions with the same denominator.

1. $\frac{3}{4}, \frac{1}{10}$

2. $\frac{2}{3}, \frac{5}{8}$

3. $\frac{5}{14}, \frac{1}{6}$

4. $\frac{1}{3}, \frac{5}{6}, \frac{4}{9}$

Copy and complete the statement using <, >, or =.

5. $\frac{3}{4} \_\_?\_\_ \frac{2}{3}$

6. $\frac{5}{12} \_\_?\_\_ \frac{4}{15}$

7. $3\frac{5}{18} \_\_?\_\_ 3\frac{7}{24}$

8. $\frac{18}{8} \_\_?\_\_ 2\frac{1}{4}$

Add or subtract. Write the answer in simplest form.

9. $\frac{1}{2} + \frac{3}{5}$

10. $\frac{4}{9} - \frac{1}{4}$

11. $\frac{5}{8} - \frac{3}{14}$

12. $\frac{7}{15} + \frac{3}{10}$

13. $4\frac{1}{8} + 3\frac{3}{4}$

14. $5\frac{7}{12} - 2\frac{2}{9}$

15. $1\frac{1}{3} + \frac{6}{7}$

16. $4\frac{11}{12} - 2\frac{3}{20}$

17. In which of Exercises 9–16 is the LCD the same as the product of the denominators? What characteristic do the denominators in this set of problems have that the other problems do not?