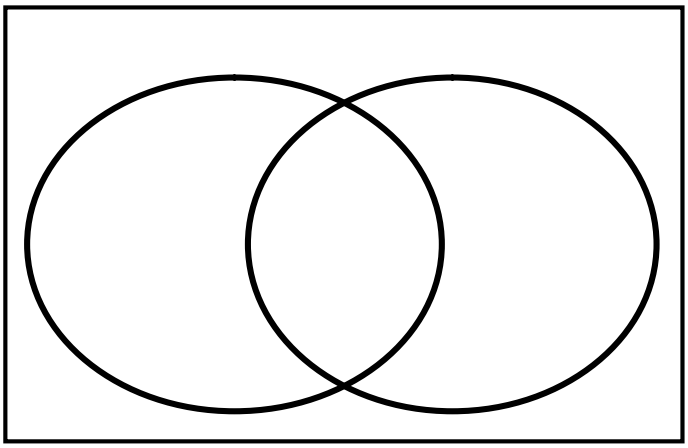
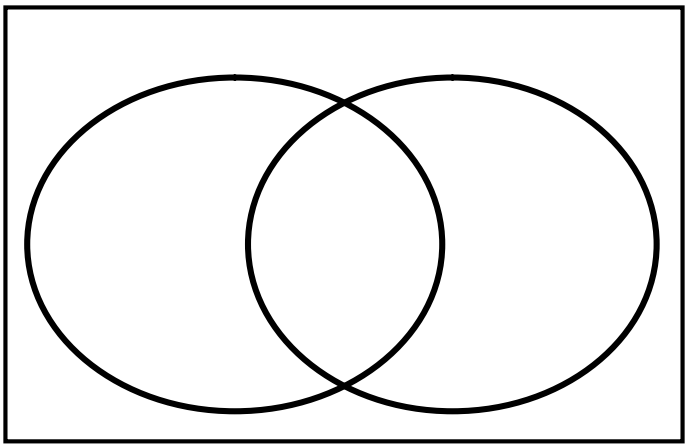
0.2b Homework: Greatest Common Factor

Make a Venn diagram to find the GCF of each pair of numbers.

1. 35 and 40



2. 20 and 80



Make a list to find the GCF of each pair of numbers.

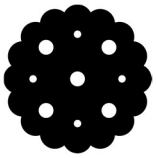
3. 30 and 50	4. 20 and 64
5. 45 and 60	6. 14 and 35

Find the GCF of each pair of numbers by writing each number as its prime factorization.

7. 42 an 70	8. 96 and 144

9. 15 and 75	10. 85 and 70

11. A caterer has 90 mini macaroons and 120 gingersnaps to arrange on plates. He wants each plate to have the same number of macaroons and each plate to have the same number of gingersnaps.



a. What is the largest number of plates possible?

b. How many macaroons and how many gingersnaps will be on each plate?

12. In a parade, 36 members of a cheerleading squad are to march in front of 120 members of the high school band. Each row is to have the same number of cheerleaders and each row is to have the same number of band members.

a. Find the greatest number of rows possible for the parade?

b. How many cheerleaders and how many band members will be in each row?

13. Laney is covering the surface of a table with equal-sized tiles. The table is 30 inches long and 24 inches wide.

    a. What is the largest square tile that Laney can use and not have to cut any tiles?

    b. How many tiles will Laney need?

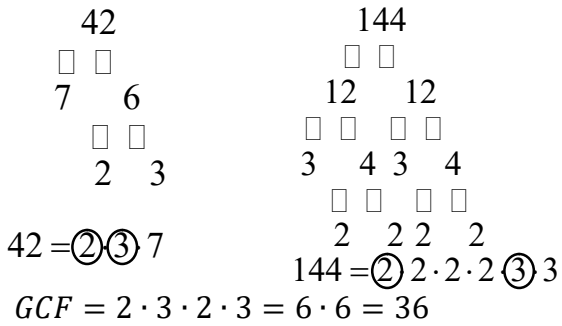
14. Circle the pairs of numbers that have a GCF of 15?

- 30 and 60
- 45 and 75
- 21 and 45
- 10 and 15

17. Write a pair of numbers whose GCF is 10.

18. Write a pair of numbers whose GCF is 8.

19. Find, Fix, and Justify
    Find the error in finding the GCF of 42 and 144 in the problem shown. Explain why it is wrong and fix the mistake.



20. True or False. Justify your answer with an example or counter-example.
    a. The GCF of two even numbers is always 2

    b. The GCF of two prime numbers is always 1

    c. Can the GCF of two numbers ever be one of the numbers?

    d. Can the GCF of two numbers ever be greater than one of the numbers?