

-Get a textbook off the table. Write your first name, last initial, class period on both the top and bottom of book with the Sharpie at your desk then put the sharpie back in the desk. Tear out textbook pages 27 - 42 AND 75 - 102 AND 137 - 142 and take your book back to the designated area of the bookshelf.

HOMEWORK - if not completed

-Work on page 28 (1-7)

-Work on page 29 ALL (not Active Reading)

-Work on all of pages 30 (just read), 31, 32

Not page 33

-Work on page 34 number 1 (all parts)

-Students who need to finish Friday's test will do so while others are working on the pages listed above.

Sep 23-12:02 PM

## LESSON 2.1 Greatest Common Factor

The **greatest common factor (GCF)** of two numbers is the greatest factor shared by those numbers.

What is the factor in math? ^

**Math** Term Definition. **Factor.** To **factor** a number means to break it up into numbers that can be multiplied together to get the original number. EXAMPLES:  $6 = 3 \times 2$  so, **factors** of 6 are 3 and 2  $9 = 3 \times 3$  so, **factors** of 9 are 3 and 3 Sometimes, numbers can be factored into different combinations.

Sep 24-7:06 PM

**Multiples** page 28



**EXAMPLE**  $5 \times 1 = 5$     $5 \times 2 = 10$     $5 \times 3 = 15$     $5 \times 4 = 20$     $5 \times 5 = 25$    To find the first five multiples of 5, multiply 5 by 1, 2, 3, 4, and 5.

List the first five multiples of the number.

1. 7 7, 14, 21, 28, 35   2. 11 11, 22, 33, 44, 55   3. 15 15, 30, 45, 60, 75

**Factors**

**EXAMPLE**  $1 \times 12 = 12$   
 $2 \times 6 = 12$   
 $3 \times 4 = 12$   
 The factors of 12 are 1, 2, 3, 4, 6, 12.   To find the factors of 12, use multiplication facts of 12. Continue until pairs of factors repeat.

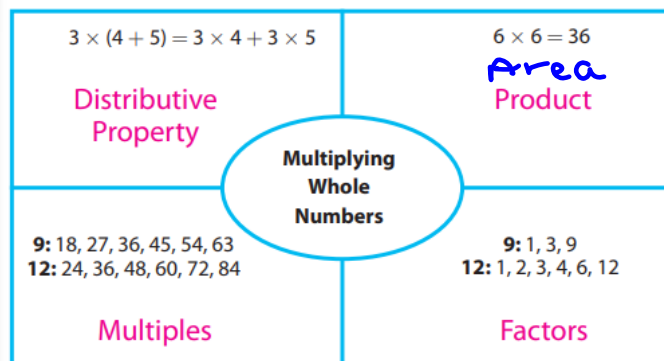
Write all the factors of the number.

4. 24 1, 2, 3, 4, 6, 8, 12, 24   5. 36 1, 2, 3, 4, 6, 9, 12, 18, 36  
 6. 45 1, 3, 5, 9, 15, 45   7. 32 1, 2, 4, 8, 16, 32

Sep 23-12:15 PM

**Visualize Vocabulary** page 29

Use the ✓ words to complete the graphic.



**Vocabulary**

**Review Words**

- ✓ area (*área*)
- ✓ Distributive Property (*Propiedad distributiva*)
- ✓ factor (*factor*)
- ✓ multiple (*múltiplo*)
- ✓ product (*producto*)

**Understand Vocabulary**

Complete the sentences below using the preview words.

1. Of all the whole numbers that divide evenly into two or more numbers, the one with the highest value is called the greatest common factor **GCF**.
2. Of all the common products of two numbers, the one with the lowest value is called the least common multiple **LCM**.

Sep 23-12:15 PM

pg. 31

A florist makes bouquets from 18 roses and 30 tulips. All the bouquets will include both roses and tulips. If all the bouquets are identical, what are the possible bouquets that can be made?



**A** Complete the tables to show the possible ways to divide each type of flower among the bouquets.

Roses (18)

Number of Bouquets	1	2	3	6	9	18
Number of Roses in Each Bouquet	18	9	6	3	2	1

Tulips (30)

Number of Bouquets	1	2	3	5	6	10	15	30
Number of Tulips in Each Bouquet	30	15	10	6	5	3	2	1

**B** Can the florist make five bouquets using all the flowers? Explain.

No; 18 (the number of roses) is not divisible by 5.

**C** What are the common factors of 18 and 30? What do they represent?

1, 2, 3, and 6; the possible numbers of bouquets

**D** What is the GCF of 18 and 30? 6

**Reflect**

1. **What If?** Suppose the florist has 18 roses and 36 tulips. What is the GCF of the numbers of roses and tulips? Explain.

Since 36 is a multiple of 18, the GCF is 18.

Sep 23-12:11 PM

pg. 32

**Finding the Greatest Common Factor**

One way to find the GCF of two numbers is to list all of their factors. Then you can identify common factors and the GCF.

**EXAMPLE 1**



FL 6.NS.2.4

A baker has 24 sesame bagels and 36 plain bagels to put into boxes. Each box must have the same number of each type of bagel. What is the greatest number of boxes that the baker can make using all of the bagels? How many sesame bagels and how many plain bagels will be in each box?



**STEP 1** List the factors of 24 and 36. Then circle the common factors.

Factors of 24: 1 2 3 4 6 8 12 24

Factors of 36: 1 2 3 4 6 9 12 18 36

The baker can divide 24 sesame bagels into groups of 1, 2, 3, 4, 6, 8, 12, or 24.

**STEP 2** Find the GCF of 24 and 36.

The GCF is 12. So, the greatest number of boxes that the baker can make is 12. There will be 2 sesame bagels in each box, because  $24 \div 12 = 2$ . There will be 3 plain bagels, because  $36 \div 12 = 3$ .

**Reflect**

2. **Critical Thinking** What is the GCF of two prime numbers? Give an example.

1; for example, the GCF of 11 and 13 is 1.

11 = 11  
13 = 13

whose factors are 1 and itself

Sep 23-12:16 PM

**YOUR TURN**

Find the GCF of each pair of numbers.

3. 14 and 35 7                      4. 20 and 28 4

5. The sixth-grade class is competing in the school field day. There are 32 girls and 40 boys who want to participate. Each team must have the same number of girls and the same number of boys. What is the greatest number of teams that can be formed? How many boys and how many girls will be on each team?

8 teams; 4 girls, 5 boys

32 girls = 1, 2, 4, 8, 16, 32

40 boys = 1, 2, 4, 5, 8, 10, 20, 40      GCF

8 Teams

Girls       $32 \div 8 = 4$

Boys       $40 \div 8 = 5$

Sep 23-12:18 PM

1. Lee is sewing vests using 16 green buttons and 24 blue buttons. All the vests are identical, and all have both green and blue buttons. What are the possible numbers of vests Lee can make? What is the greatest number of vests Lee can make? (Explore Activity 1, Example 1) pg.34

List the factors of 16 and 24. Then circle the common factors.

Factors of 16:	①	②	④	⑧	16			
Factors of 24:	①	②	3	④	6	⑧	12	24

What are the common factors of 16 and 24? 1, 2, 4, 8

What are the possible numbers of vests Lee can make? 1, 2, 4, 8

What is the GCF of 16 and 24? 8

What is the greatest number of vests Lee can make? 8

Sep 24-10:42 AM