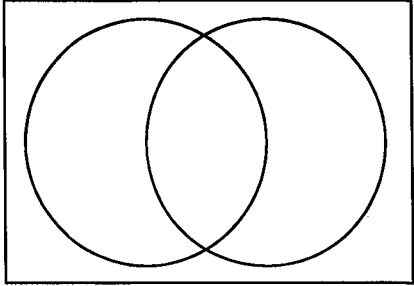


FACTORS AND MULTIPLES

FACTORS

- A number is _____ of other numbers, called factors.
- For example, $2 \cdot 3 = 6$
 - _____ and _____ are factors of _____
- When a set of numbers has the same factor, it is called a _____ factor. The _____ is the largest factor that a set of numbers has in common.

There are several methods to help find the greatest common factor.

VENN DIAGRAMS	<p>Use a factor tree to factor 15 and 60, and then organize the factors into the Venn diagram below.</p> <p style="text-align: center;">15 60</p> <div style="text-align: center;">  </div>
LADDER METHOD	<p>Use upside-down division (ladder) to find the greatest common factors.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; margin: 5px;"> <p style="text-align: center;">20 16</p> <hr style="width: 100%;"/> </div> <div style="border: 1px solid black; padding: 5px; margin: 5px;"> <p style="text-align: center;">24 40</p> <hr style="width: 100%;"/> </div> </div>

Use your understanding of greatest common factor to answer the questions below.

1. Find the GCF of 24 and 6.	2. Find the GCF of 18, 24, and 60.
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MULTIPLES

• A multiple of a number is the _____ of multiplying that number by another number.

Ex: the first five multiples of 7 are _____

• The least common multiple is the _____ common multiple a set of numbers has in common.

List out the first ten multiples of each number. Then, determine the least common multiple.

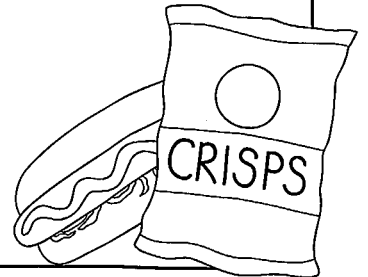
3. 4 and 9 GCF: _____	4. 3 and 7 GCF: _____
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Apply your understanding of factors and multiples to answer the questions below.

5. Ella and Ethan planned a BBQ for their soccer team. They purchased 60 hot dogs and 48 individual bags of chips.

a. If each person will receive the same amount of food and there will be no leftovers, then what is the greatest number of people that they can feed?

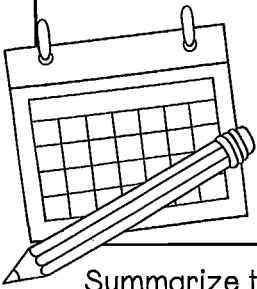
b. What will each person receive?



6. The Vasquez family visits their grandmother every 3 weeks and spends a day volunteering every 8 weeks. Every 16th week, the Vasquez family takes a day to go hiking.

a. After how many weeks will the Vasquez family both visit their grandmother and volunteer?

b. After how many weeks will all three events occur?



Summarize today's lesson:

FACTORS AND MULTIPLES

In questions 1-3, find the least common multiple of each set of numbers.

1. 9 and 7	2. 10 and 6	3. 4, 8, and 3
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In questions 4-6, find the greatest common factor of each set of numbers.

4. 15 and 60	5. 36 and 48	6. 16, 24, and 40
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Answer the questions below by applying your understanding of LCM and GCF.

7. A holiday toy drive is putting together baskets for children. There are 84 toys and 56 books. If each basket will receive the same number of toys and books so that no toys or books are leftover, then how many baskets can be made?	8. A neighborhood trash pick-up comes every 7 days, while the recycling pick-up is every 12 days. After how many days will both the trash and recycling be picked up on the same day?
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9. Addie organizes the Venn diagram below. Her partner Reid says that it is incorrect. Who is correct? Prove your thinking.

