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Module 4 Fractions, Decimals, Percents, and Factors
Lesson 4 Prime Factorization, GCF, and LCM

Lesson Objectives

- Use a variety of methods, including prime factorization, to determine the Least Common Multiple (LCM).
- Apply factorization, GCF, and LCM to solve problems.

Subtopic 1 Least Common Multiple

- A _____ of a number is the product of the number and a counting number.
- The smallest multiple shared by two or more numbers is the _____.

Find the LCM.

★ 1 9 and 15

★ 2 6, 8, and 9

Subtopic 2 Using Prime Factorization to Find the LCM

Two ways to find the LCM of a set of numbers:

- Listing the _____
- Using _____

To find the LCM using prime factorization:

- List each prime number the _____ number of times used.
- _____ those factors.

GCF and LCM

- An LCM is useful when adding and subtracting _____ with _____ and solving problems.
- A GCF is useful when _____ and solving problems.

Find the LCM.

3 8 and 27



4 28 and 42



5 12, 16, and 24



Subtopic 3 Applications Using the LCM of More Than Two Numbers

6 Nancy is buying beads to make a necklace. Red beads cost 12 moon dollars each, blue beads cost 36 moon dollars each, and yellow beads cost 52 moon dollars each. Nancy wants to spend an equal amount on each color bead and spend as little as possible. How much will Nancy spend to make her necklace?



Subtopic 4 Applications Using the GCF of More Than Two Numbers

- The _____ is the largest factor two or more numbers share.

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7 Sharon is filling supply boxes for her friends at space camp. She has 20 pencils, 30 pens, and 45 markers. She wants to make as many boxes as possible with the same supplies in each. No supplies can be left over. How many boxes will Sharon fill? How many of each item is in each box?



8 Jackie is decorating the gymnasium with flowers for the school dance. She has 32 carnations, 36 roses, and 40 daisies. She wants to make as many identical flower arrangements as possible without any flowers left over. If carnations cost \$1 each, roses cost \$4 each, and daisies cost \$2 each, how much will each flower arrangement cost? How many of each flower is in each arrangement?

