Objective: REVIEW

Factors, Multiples, Distributive Property, Divide Whole Numbers

The **least common multiple (LCM)** of two numbers is the lowest possible number that can be divisible by both numbers. It can be calculated for two or more numbers as well. There are different methods to find the LCM of a given set of numbers. One of the quickest ways to find the LCM of two numbers is to use the prime factorization of each number and then the product of the highest powers of the common prime factors will be the LCM of those numbers. Let us learn how to find the lowest common multiples of numbers on this page.

The **GCF (Greatest Common Factor)** of two or more numbers is the greatest number among all the common factors of the given numbers. The GCF of two natural numbers x and y is the largest possible number that divides both x and y without leaving any remainder. To calculate GCF, there are three common ways- division, multiplication, and prime factorization.

The **distributive property** is also known as the distributive law of multiplication over addition and subtraction. The name itself signifies that the operation includes dividing or distributing something. The distributive law is applicable to addition and subtraction.

In **division**, the number that is divided is the **dividend**. The number that divides the dividend is the **divisor.** The answer to a division problem is the **quotient**. Some division problems will have a remainder. A **remainder** is a counting number that is left over when two counting numbers are divided. A remainder is always less than the divisor.

1. What is the greatest common factor (GCF) of 25 and 35?

   A. 1

   B. 5

   C. 7

   D. 25

2. What is the least common multiple (LCM) of 2 and 6?

   A. 12

   B. 10

   C. 8

   D. 6

3. What is the GCF of 24 and 36?

   A. 12

   B. 9

   C. 6

   D. 3

4. What is the LCM of 6 and 10?

   A. 12

   B. 20

   C. 30

   D. 60

5. Which of the following is equivalent to $33 + 77$?

   A. $3(11 + 7)$

   B. $(3 \times 11) \times (7 \times 11)$

   C. $7(3 + 11)$

   D. $11(3 + 7)$

6. The number 108 can be expressed as the sum $100 + 8$. Which shows how to use the distributive property to rewrite that sum as a multiple of a sum whose addends have no common factors?

   A. $2(50 + 4)$

   B. $4(25 + 2)$

   C. $5(20 + 1)$

   D. $8(12 + 1)$

7. Ms. Madison directs two choruses. One chorus has 28 students. The other chorus has 36 students. For rehearsals, she wants to divide each chorus into the largest possible equal groups, with no students left over. How many students will be in each group?

A. 2

B. 4

C. 9

D. 12

8. Two airport shuttle trains leave the main station at the same time. Shuttle A returns to the station every 8 minutes. Shuttle B returns to the station every 10 minutes. In how many minutes will Shuttles A and B leave the station together for the second time?

A. 10 minutes

B. 18 minutes

C. 40 minutes

D. 80 minutes

9. Evan bought two plants. He decided to water his first plant every 3 days and his second plant every 4 days.

A. If he watered both plants on June 1, how many days passed before he watered both plants on the same day again? Show or explain your work.

B. On June 25, Evan decided that he was not watering his first plant frequently enough. He started watering his first plant every 2 days. He continued to water his second plant every 4 days. If he watered both plants that day, how many days passed before he watered both plants on the same day again? Show or explain your work.

10. Use numbers from the box. Write the greatest common factor (GCF) of each pair of numbers.

12 and 18   GCF = _____

24 and 36   GCF = _____

18 and 24   GCF = _____

12 and 36   GCF = _____

6
12
24

11. Draw a line from each pair of numbers to their least common multiple.

A. 3 and 14 •   • 18

B. 5 and 12 •   • 36

C. 4 and 9 •   • 42

D. 2 and 9 •   • 60

12. Write the pairs of numbers in the correct box.

4 and 8	6 and 10	8 and 12

10 and 12	20 and 24	14 and 20

Greatest Common Factor of 2	Greatest Common Factor of 4

1. What is 2,520 ÷ 36?

   A.   7
   B.   70
   C.   170
   D.   210

2. What is 6,854 ÷ 17?

   A.   40 R3
   B.   403
   C.   403 R3
   D.   430

3. What is 11,362 ÷ 46?

   A.   247
   B.   248
   C.   252
   D.   253

4. What is 72,450 ÷ 25?

   A.   2,888
   B.   2,892
   C.   2,898
   D.   2,902

5. Mr. and Mrs. Chin flew from New York to Tokyo, which is a distance of 6,375 miles. If it took the plane 15 hours to fly from New York to Tokyo, what was the plane's average speed per hour?

   A.   415 miles per hour
   B.   425 miles per hour
   C.   435 miles per hour
   D.   475 miles per hour

6. Eggs are packed 12 to a carton. There are 7,260 eggs to be put in cartons. How many cartons are needed for the eggs?

   A.   65
   B.   605
   C.   625
   D.   650

7. Ticket sales for a concert totaled $89,200. Tickets for the concert cost $16 each. How many tickets were sold?

   A.   557

   B.   575

   C. 5,570

   D. 5,575

8. Homer's annual salary is $74,308. If he works all 52 weeks of the year, how much is he paid each week?

   A. $1,249

   B. $1,294

   C. $1,429

   D. $1,439

9. An airport has 24 gates. One month, 43,776 passengers left through the gates.

   A. What was the average number of passengers that left through each gate?

   _____

   B. Explain how you knew where to place the first digit in the quotient in Part A.

   _____

   _____

   _____

10. Select True or False for each equation.

   A. $1,064 \div 56 = 19$ ○ True   ○ False

   B. $2,280 \div 95 = 24$ ○ True   ○ False

   C. $1,891 \div 13 = 27$ ○ True   ○ False

   D. $1,932 \div 42 = 46$ ○ True   ○ False

11. Look at each equation. Is the equation true? Select Yes or No.

    A. $522 \div 58 = 9$ ○ Yes   ○ No

    B. $152 \div 6 = 25 \text{ R2}$ ○ Yes   ○ No

    C. $187 \div 12 = 17$ ○ Yes   ○ No

    D. $416 \div 23 = 18 \text{ R3}$ ○ Yes   ○ No

12. Use a number from the box to make each equation true.

$285 \div \rule{2cm}{0.4pt} = 19$

$330 \div 22 = \rule{2cm}{0.4pt}$

$352 \div 16 = \rule{2cm}{0.4pt}$

$528 \div \rule{2cm}{0.4pt} = 24$

15
16
22
24

13. Draw a line from each division expression to its quotient.

    A. $585 \div 45$ •   • 12

    B. $552 \div 46$ •   • 13

    C. $641 \div 40$ •   • 14 R4

    D. $592 \div 42$ •   • 16 R1

14. Write each division expression in the correct box.

$272 \div 17$	$270 \div 15$	$352 \div 22$	$320 \div 20$	$306 \div 17$	$450 \div 25$

Quotient of 16	Quotient of 18

LESSON SE 1a

Objective

Circle every pair of numbers that have a least common multiple of 6.

A. 2 and 3   D. 3 and 6

B. 3 and 5   E. 4 and 6

C. 2 and 5

Select True or False for each equation.

A. $30 + 45 = 5(6 + 9)$ ○ True   ○ False

B. $18 + 42 = 6(3 + 7)$ ○ True   ○ False

C. $14 + 21 = 3(6 + 7)$ ○ True   ○ False

D. $20 + 68 = 20(1 + 3)$ ○ True   ○ False

A restaurant owner orders new plates and spoons based on the information below.

- plates are sold in packages of 9

- spoons are sold in packages of 12

The restaurant owner orders an equal number of plates and spoons. What is the **least** number of packages of plates and packages of spoons she should order to have an equal number of plates and spoons?

Show your work.