

## Bellwork - Work on pages 37-38.

Have your HW (SPIRAL/COMP paper)  
out from yesterday with the number of  
problems you attempted written at the top  
(11)

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Find the GCF of each pair of numbers.

pgs 35-36

9. 40 and 48 8

11. 10 and 45 5

13. 21 and 40 1

15. 60 and 72 12

17. 28 and 32 4

19. Carlos is arranging books on shelves. He has 24 novels and 16 autobiographies. Each shelf will have the same numbers of novels and autobiographies. If Carlos must place all of the books on shelves, what are the possible numbers of shelves Carlos will use?

1, 2, 4, or 8 shelves

$$12 = 1, 2, 3, 4, \textcircled{6}, 12$$

$$42 = 1, 2, 3, \textcircled{6}, 7, 14, 21, 42$$

21. For football tryouts at a local school, 12 coaches and 42 players will split into groups. Each group will have the same numbers of coaches and players. What is the greatest number of groups that can be formed? How many coaches and players will be in each of these groups?

6 groups; 2 coaches and 7 players

$$12 \div 6 \quad 42 \div 6$$

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Write the sum of the numbers as the product of their GCF and another sum.

$$(8+7) \times (8+8) = 8(7+8)$$

GCF                      Sum

$$\begin{array}{r} 56 \\ +64 \\ \hline \end{array}$$

23.  $56 + 64 = 8 \times (7 + 8)$

25.  $30 + 54 = 6 \times (5 + 9)$

27.  $55 + 66 = 11 \times (5 + 6)$

29.  $40 + 25 = 5 \times (8 + 5)$

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### Finding the Least Common Multiple pg. 37

### LESSON 2.2 Least Common Multiple

A multiple of a number is the product of the number and another number. For example, 9 is a multiple of the number 3. The **least common multiple (LCM)** of two or more numbers is the least number, other than zero, that is a multiple of all the numbers.



**Ned is training for a biathlon. He will swim every sixth day and bicycle every eighth day. On what days will he both swim and bicycle?**

- A** In the chart below, shade each day that Ned will swim. Circle each day Ned will bicycle.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

swims ev. 6<sup>th</sup>   
bic ev 8<sup>th</sup>

- B** On what days will Ned both swim and bicycle?

24, 48, 72, and 96

The numbers of the days that Ned will swim and bicycle are common multiples of 6 and 8.

**Reflect**

1. **Interpret the Answer** What does the LCM represent in this situation?

The first day that Ned will both swim and bicycle.

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## Applying the LCM pg. 38

You can use the LCM of two whole numbers to solve problems.

**EXAMPLE 1** FL 6.NS.2.4

**A store is holding a promotion. Every third customer receives a free key chain, and every fourth customer receives a free magnet. Which customer will be the first to receive both a key chain and a magnet?**

**STEP 1** List the multiples of 3 and 4. Then circle the common multiples.

**Multiples of 3:** 3   6   9   12   15   18   21   24   27

**Multiples of 4:** 4   8   12   16   20   24   28   32   36

**STEP 2** Find the LCM of 3 and 4.

The LCM is 12.

The first customer to get both a key chain and a magnet is the 12th customer.

**YOUR TURN**

2. Find the LCM of 4 and 9 by listing the multiples. 36

**Multiples of 4:** 4, 8, 12, 16, 20, 24, 28, 32, 36, 40

**Multiples of 9:** 9, 18, 27, 36, 45, 54, 63, 72, 81, 90

*Handwritten notes:*  
 $9 = 9, 18, 27, 36$   
 $4 \times 9 = 36$

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## Guided Practice

1. After every ninth visit to a restaurant you receive a free beverage. After every twelfth visit you receive a free appetizer. If you visit the restaurant 100 times, on which visits will you receive a free beverage and a free appetizer? At which visit will you first receive a free beverage and a free appetizer? (Explore Activity 1, Example 1)

36th and 72nd visits; 36th visit

*Handwritten notes:*  
 $12 = 12, 24, 36$   
 $9 \times 4$

**ESSENTIAL QUESTION CHECK-IN**

2. What steps can you take to find the LCM of two numbers?

Find common multiples of the two numbers; the LCM is the least multiple both numbers have in common.

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Find the LCM of each pair of numbers. pg.39

3. 8 and 56 56

$$\begin{array}{r} 56 \\ 8 \times 7 = 56 \end{array}$$

When you are finished, work on  
problems 11 - 15

7. 16 and 24 48

$$\begin{array}{r} 16 \\ \times 3 \\ \hline 48 \end{array} \quad \begin{array}{r} 24 \\ \times 2 \\ \hline 48 \end{array}$$

8. 14 and 21 42

$$\begin{array}{r} 14 \\ \times 3 \\ \hline 42 \end{array} \quad \begin{array}{r} 21 \\ \times 2 \\ \hline 42 \end{array}$$

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11. During February, Kevin will water his ivy every third day, and water his cactus every fifth day. 3 5

a. On which date will Kevin first water both plants together?

February 15

b. Will Kevin water both plants together again in February? Explain.

No; there are only 28 or 29 days in February, and the next common multiple of 3 and 5 is 30.

$$\text{LCM } 15 \times 2 = 30$$

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Use the subway train schedule.

13. The red line and the blue line trains just arrived at the station. When will they next arrive at the station at the same time?

In 40 minutes

R 8.5  
B 10 - 18, 20, 26



14. The blue line and the yellow line trains just arrived at the station. When will they next arrive at the station at the same time?

In 60 minutes

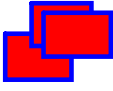
B 10  
Y 12, 18, 24 (60)

Train Schedule	
Train	Arrives Every...
Red line	8 minutes
Blue line	10 minutes
Yellow line	12 minutes

15. All three trains just arrived at the station. When will they next all arrive at the station at the same time?

In 120 minutes

120



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### Homework

Textbook pages 42 (all)

8 Problems



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