Least Common Multiple

Factors & Multiples • Answer Key

ANSWER KEY • Amplify Alignment: Grade 6 Accelerated, Unit 2, Lesson 6

1. List the multiples of each number, up to 100.

a 14

14, 28, 42, 56, 70, 84, 98

b 18

18, 36, 54, 72, 90

c 25

25, 50, 75, 100

d 30

30, 60, 90

2. Consider the numbers 4 and 10.

a What are the first six multiples of 4?

4, 8, 12, 16, 20, 24

b What are the first six multiples of 10?

10, 20, 30, 40, 50, 60

c What are the first two common multiples of 4 and 10?

20 and 40

d What is the least common multiple (LCM) of 4 and 10?

20

3. Consider the numbers 6 and 9.

a What are the first eight multiples of 6?

6, 12, 18, 24, 30, 36, 42, 48

b What are the first eight multiples of 9?

9, 18, 27, 36, 45, 54, 63, 72

c What are the first two common multiples of 6 and 9?

18 and 36

d What is the least common multiple (LCM) of 6 and 9?

18

4. Determine the least common multiple of each pair of numbers. Explain your thinking.

a 7 and 4

28 (7, 14, 21, 28; 28 is the first multiple of 7 that is also a multiple of 4)

b 6 and 8

24 (6, 12, 18, 24; 8, 16, 24)

5. Select all the common multiples of 5 and 6.

- ☐ **A.** 20
- ☐ **C.** 45
- ☐ **E.** 75
- ☑ **B.** 30
- ☑ **D.** 60
- ☑ **F.** 90

6. Holiday lights blink at different intervals.

a A red light blinks every 4 seconds and a green light blinks every 6 seconds. List the first three times (in seconds) when both lights blink at the same time.

12, 24, and 36 seconds

b A blue light blinks every 2 seconds and a white light blinks every 8 seconds. List the first three times when both lights blink at the same time.

8, 16, and 24 seconds

7. For a class party, napkins are sold in packages of 15 and cups are sold in packages of 18.

a What is the fewest number of packages of each you can buy so that there are the same number of napkins and cups?

Napkins: **6 packages** Cups: **5 packages**

b How many matching napkin-and-cup sets will there be? **90 sets**

8. Ava, Ben, and Cami each found the least common multiple of 4, 6, and 9.

- Ava says the least common multiple is 36.
- Ben says the least common multiple is 24.
- Cami says the least common multiple is 216.

Who is correct? Explain your thinking.

Ava is correct. 36 is a multiple of 4, 6, and 9, and no smaller number is. 24 is not a multiple of 9. 216 is a common multiple (4 × 6 × 9) but not the *least* one.