Least Common Multiple — Homework

Lesson 6-12 • Standard 6.NOS.4

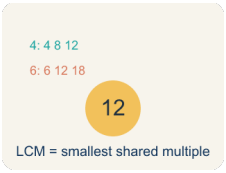
Name: _____ **Period:** _____ **Date:** _____

Today's Goals

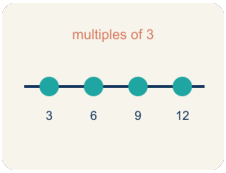
Content: I can find the least common multiple (LCM) of two numbers by listing or comparing their multiples.

Language: I can explain how I found the LCM using the words multiple, common multiple, skip counting, and least common multiple.

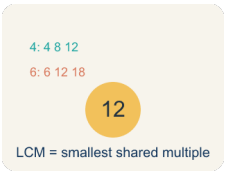
Key Words



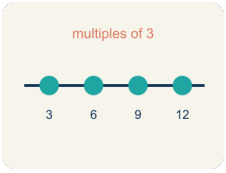
Least Common Multiple (Mínimo común múltiplo) — The least positive number that is a multiple of two or more numbers.



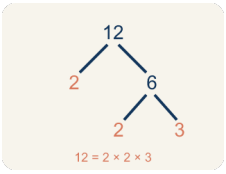
Multiple (Múltiplo) — What you get when you multiply a number by 1, 2, 3, and so on.



Common multiple (Múltiplo común) — A number that two or more numbers both go into.



Skip counting (Conteo salteado) — Counting by a number, like 2, 4, 6, to list its multiples.



Prime factorization (Factorización prima) — Writing a number as prime numbers multiplied together. It helps you find the LCM.

Practice

Show your work. Use the blank space under each problem.

1. What is the LCM of 3 and 5?

A. 3
B. 5
C. 15
D. 30

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2. What is the LCM of 6 and 8?

A. 6
B. 14
C. 24
D. 48

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3. Match each pair of numbers to their LCM.

Item	Answer choices
____ LCM(2, 5)	F. 12
____ LCM(4, 10)	E. 35
____ LCM(3, 8)	D. 18
____ LCM(6, 9)	C. 24
____ LCM(5, 7)	B. 20
____ LCM(4, 6)	A. 10

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4. List multiples of each number until you find the LCM.

Numbers	Multiples of First	Multiples of Second	LCM
6 and 10	6, 12, 18, 24, 30	10, 20, 30	
8 and 12	8, 16, 24	12, 24	
9 and 12	9, 18, 27, 36	12, 24, 36	

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5. Two rovers leave the space station at 8:00 AM. Rover A returns every 15 minutes and Rover B returns every 20 minutes. When is the next time both rovers are at the station together?

A. 8:30 AM (30 minutes later)
B. 8:40 AM (40 minutes later)
C. 9:00 AM (60 minutes later)
D. 9:20 AM (80 minutes later)

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6. Sort each pair: does the LCM equal the product of the two numbers, or is the LCM less than the product?

Groups: LCM = Product (no shared factors) | LCM < Product (shared factors)

- 3 and 7 → _____
- 5 and 11 → _____
- 2 and 9 → _____
- 4 and 6 → _____
- 6 and 8 → _____
- 10 and 15 → _____

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7. Spot Maya's Mistake — LCM of 6 and 9

Step 1 (Problem): Find the LCM of 6 and 9.
Step 2 (Multiples of 6): 6, 12, 18, 24
Step 3 (Multiples of 9): 9, 18, 27
Step 4 (Choose the answer): Maya saw that 9 is bigger than 6, so she wrote LCM = 9.

Which step has the mistake? Explain and fix it:

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8. On the space station, the air filter runs every 4 min and the water pump runs every 6 min. They just ran together. In how many minutes do they run together again?

A. 6
B. 10

C. 12
D. 24

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9. One supply pod docks at the space station every 8 min, and another docks every 12 min. They just docked together. In how many minutes do they dock together again?

A. 16
B. 20
C. 24
D. 48

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10. Stop 3 — Engineering Deck: Match each pair of station systems to the LCM of their cycle times (when they next sync).

Item	Answer choices
____ Solar panels (LCM 6 & 10 min)	D. 12
____ Coolant pumps (LCM 5 & 8 min)	C. 9
____ Comms relay (LCM 3 & 9 min)	B. 40
____ Lab fans (LCM 4 & 6 min)	A. 30
