LESSON MAKER PRO

LCD Detective

Find the smallest denominator two fractions can share.

GRADE 5 · 5.CE.2.a

5.CE.2.a "Determine the least common multiple of two numbers to find the least common denominator for two fractions."

NAME _____ DATE _____

FIND THE FIRST MATCH

The least common denominator, or LCD, is the smallest number that both denominators divide into evenly. List multiples of each denominator and find the first multiple they share. That shared multiple is also the least common multiple, or LCM.

WORKED EXAMPLE

Find the LCD for 1/6 and 3/8.

1. List multiples of 6: 6, 12, 18, 24.
2. List multiples of 8: 8, 16, 24.
3. The first shared multiple is 24.

Answer: LCD = 24

PRACTICE 6 problems

1 Find the LCD for 1/4 and 3/5.

ANSWER _____

2 Find the LCD for 5/9 and 1/12.

ANSWER _____

3 Find the LCD for 7/10 and 2/15.

ANSWER _____

4 Find the LCD for 3/14 and 5/7.

ANSWER _____

5 Find the LCD for 11/16 and 7/20.

ANSWER _____

6 Find the LCD for 4/18 and 5/24.

ANSWER _____

APPLY IT Show your work

1 Kai finished 5/12 of a video game quest. His cousin finished 7/18 of the same quest. What is the least common denominator they can use to compare their fractions?

WORK SPACE

ANSWER _____

2 A music app shows that one playlist has 3/14 of its songs marked as favorites. Another playlist has 5/21 of its songs marked as favorites. What is the least common denominator for comparing the fractions?

WORK SPACE

ANSWER _____

CHALLENGE One step up

A student says the LCD of 7/18 and 5/24 is 216. Is the student correct? Find the LCD and explain why it is the least common denominator.

WORK SPACE AND ANSWER

ANSWER KEY

LCD Detective

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PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Find the LCD for 1/4 and 3/5.	**LCD = 20**
2	Find the LCD for 5/9 and 1/12.	**LCD = 36**
3	Find the LCD for 7/10 and 2/15.	**LCD = 30**
4	Find the LCD for 3/14 and 5/7.	**LCD = 14**
5	Find the LCD for 11/16 and 7/20.	**LCD = 80**
6	Find the LCD for 4/18 and 5/24.	**LCD = 72**

PART 2 · APPLY IT

1. **LCD = 36** Find the LCM of 12 and 18. The first shared multiple is 36.
2. **LCD = 42** Find the LCM of 14 and 21. The first shared multiple is 42.

CHALLENGE

No. The LCD is 72. Multiples of 18 are 18, 36, 54, 72, and multiples of 24 are 24, 48, 72, so 72 is the first shared multiple.

Accept answers written as a number or as "LCD =" followed by the number. Students may find the LCM by listing multiples or by using factor reasoning, as long as the denominator is the least shared multiple.