

LCM OF 2-DIGIT WHOLE NUMBERS

Subject

Mathematics

Prepared By

[Instructor Name]

Grade Level

5

Overview

This lesson plan covers teaching content for;

1. Least common multiples of two numbers
2. Quantitative reasoning problems involving LCM

Objectives

Students should be able to;

1. Identify the least common multiple of two numbers.
2. Solve quantitative reasoning problems involving LCM

Activity Starter/Instruction

1. Ask students if they know what a multiple is
2. Explain that a multiple is a number that can be divided evenly by another number, with no remainder. "For example, 15 is a multiple of 5, because 15 divided by 5 is 3. 49 is a multiple of 7, because 49 divided by 7 is 7."
3. Write the number 5 on the board. Say several numbers and ask students to give you thumbs up or thumbs down if the number is a multiple of 5.
4. Tell students that today they will be finding the least common multiple of two numbers. Explain that this will be an important skill for working with more difficult fraction problems in the future.

Guided Practice

Day 2/ Lesson 2: 15 Mins

1. Start by posing the following situation: After games in Lydia's basketball league, one player's family brings snacks for both teams to share. This week Lydia's family will provide juice and snacks for 24 players. Juice comes in packs of 12 and granola bars come in packs of 18. If there are 36 players, what

Teacher Guide

Day 1/Lesson 1: 20 Mins

1. Ask students what "least" means. Explain that least means the item with the smallest value. Ask students what "common" means.
2. Explain that common means when something belongs to two or more values. Give some examples of the concept of "common." Tell students that when we find the least common multiple, we find the smallest multiple that two numbers have in common. In order to do this, we must first list several multiples of each number.
3. Write the number 10 on the board. Have students help you list the multiples. Remind them that in order to come up with the multiples, they can either count by 10s or use multiplication. After listing several multiples of 10, write the number 9 on the board. Have students help you list the multiples of 10.
4. Show students how to underline the multiples that are common, and then circle the one that is the smallest. Students should see that 20 is the least common multiple.
5. Repeat this exercise at least one more time with different numbers, such as 12 and 14.

Materials Required

- White board
- Marker
- Sticky notes

Additional Resources

- <https://www.teachsecondary.com/maths-and-science/view/lesson-plan-ks4-mathematics-highest-common-factor-lowest-common-multiple>
- <https://www.mathgoodies.com/lessons/vol3/lcm>
- <https://mathgeekmama.com/least-common-multiple-practice/>
- <https://www.smartickmethod.com/blog/math/operation-and-algebraic-thinking/divisibility/least-common-multiple>
- <https://aminghori.blogspot.com/2017/02/normal-0-false-false-en-us-x-none.html>
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Additional Notes

is the least number of packs needed so that each player has a drink and snack and there are none left over?

2. Have students work in groups to solve the problem.
3. Give each group a sticky note. When they have their answer they will write it on the sticky note, with their names, and one student will place it in the designated place on the board (draw a square for them to place them in).
4. Have students share their answer and how they found them with the class.
5. Tell the students that 36 is the Least Common Multiple of 12 and 18. Review what a multiple is and go over the definition of a LCM

Guided Practice

Day 3/ Lesson 3: 20mins

1. In this activity called the showdown activity, the pupils will work independently. You want to have an equal number of plastic cups and paper plates. What is the least number of packages of each you can buy;

Item	#per Pack
Paper Plates	10
Plastic Cups	15

2. When all students have found a solution, the showdown captain yells 'showdown' and all students turn their books to reveal their solution.
3. Players discuss their solutions, peer tutor and coach to help establish the correct answer. When all players are in agreement, a new showdown captain takes over and a new problem is revealed. The process starts over again.
4. Since students are not being supervised at this station, place them near your work station. This way you can monitor the amount of work being done. If pupil behavior is an issue. Have the students do work independently and collect this at the end of the class period.

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Assessment Activity

1. Find the LCM of 12 and 15
 2. Find the LCM of 18 and 24.
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Assessment Activity

1. Distribute sheet of papers to pupils and instruct them to list the multiples of 3 and 5.
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		<p>Then tell them to circle the least common multiple.</p> <p>2. Collect the sheet of papers to check for pupils' understanding.</p>
	<p>Summary</p> <p>1. Ask a pupil to explain LCM.</p> <p>2. Review the guided questions. Discuss all methods used.</p>	