Discover!

Math

6

SAMPLE PDF

LESSON 1

Real-World Number Problems

Lesson Objectives

By the end of this lesson, your student will be able to:

- add and subtract multi-digit numbers
- solve real-world word problems using addition and subtraction

Supporting Your Student

Play *(Number Pyramid)*

Have your student review the pyramid and share what they notice. Ask your student to describe what they need to do to complete the pyramid. Your student's response should show they know some empty spaces will require addition to fill whereas others will require subtraction or undoing. If your student is stuck, model by talking through one or two empty spaces from the bottom row.

Explore

Discuss the Explore section with your student. Encourage your student to write a number sentence that will help them solve the problem. Ask your student how they know addition will be used. Ask your student to describe how the problem would change if the task were to require subtraction.

Read *(Regrouping to Subtract Multi-Digit Numbers)*

Encourage your student to cross off place value blocks from both the minuend and the subtrahend. Your student should cross them off in a one-to-one correspondence. When your student is regrouping, encourage them to replace the larger unit to show breaking it into smaller units to show their thinking. Emphasize that the value of the whole number remains the same. The block is just broken into smaller units to remove from.

Learning Styles

Auditory learners may enjoy talking through possible solutions before writing a response.

Visual learners may enjoy using place value charts to solve any problem.

Kinesthetic learners may enjoy using physical or digital place value blocks to solve any problem.

Sharpen Your Skills Support

Math facts and skills are included in each lesson to provide your student with opportunities to practice the skills they need to be successful in their coursework. Flash cards can be used to sharpen your student's math facts and skills.

To help your student with their math facts or skills, use the digital content or physical flash cards to practice. If your student has already mastered this math fact or skill, challenge them with another math fact or skill they still struggle to understand.

Booster Activity

Counting Forward and Backward

Play a ball-toss activity to help your student skip count forward and backward. Choose a number between 0 and 100,000 as a starting point. Choose a value to skip count. Play by passing the ball back and forth with your student, skip counting with each catch. Play a few rounds counting forward before counting backward. Finally, have your student draw a blank number line with tick marks. Give your student a value to skip count by and a starting number. Have your student tell you the next number in the series. Encourage your student to use the number line to support counting backward.

Co-Op Activities

What's the Difference?

Distribute the number cards in a deck evenly among players. In each round, have each player flip over six cards to create two three-digit numbers. Each player should find the difference between their two numbers. The player with the lowest difference wins the round and collects all the cards. When all cards have been played, the winner is the player with the most cards. Note: Players can reuse cards they have won until one player is named the winner.

Race to 1,000

You will need three dice, a pencil, and paper. The goal is to be the first player to reach a sum of 1,000. Each player takes a turn rolling three dice and using the results to make a three-digit number. Each player records their three-digit number. At the end of each player's turn, they should find the sum of their rolls. At the end of the game, discuss whether there is a winning strategy. Discuss how different arrangements of the rolled digits would change the results.

Extension Activities

Real-World Poster

Have your student think of an example of adding and subtracting multi-digit numbers in the real world. You can decide whether your student may refer to books or use a search engine. Have your student write their own real-world examples of adding or subtracting multi-digit numbers.

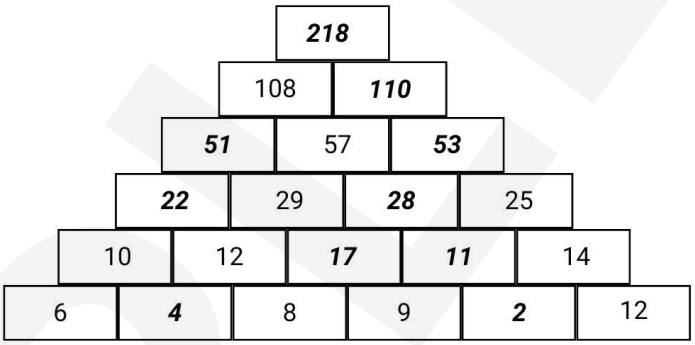
Mental Math Number Riddles

Choose and read a math story that gives examples of math in action. (You can check out *Mammoth Math*, by David Macaulay, for some ideas.) The story should present a starting five- to six-digit number (i.e., 25,300). Then, give your student two to four clues (i.e., double the hundreds place, subtract 50, add 10). Have them figure out the new number. You can do this with as many different numbers as you'd like, and then switch roles.

Answer Key

Play *(Number Pyramid)*

Answers are in bold and italics.



Explore

116 + 124 = 240 miles

Write *(Label the addends and sum in the equation.)*

addends: 436, 521

sum: 957

Play *(Missing Digit Puzzle)*

1. 3̲92 + 219̲ = 611

2. 1,9̲26 + 21̲4 = 2,140

3. 58̲1 + 2̲37 = 918

Practice *(Regrouping to Add)*

Your student should show 746 plus 385 to show 1131 in total.

Write *(Label the difference, subtrahend, and minuend in the equation.)*

minuend: 1,876

subtrahend: 1,321

difference: 555

Take a Closer Look

1. about 500

2. about 300

3. about 5,000

4. about 500

Real-World Number Problems

Practice *(Regrouping to Subtract)*
Your student should cross out 246 to show 139 remaining.

Write *(What is the cost difference between Option 3 and Option 4?)*
$560

Practice *(Real-World Adding and Subtracting)*

1. Friday
2. 7,191
3. 68,987
4. Fun World
5. 2,989
6. Friday; 53,208
7. B
8. C
9. D
10. A

Skill Builder *(Measurement and Data)*

1. 4 feet, 2 inches
2. 3 feet, 4 inches
3. Answers will vary. Riders at least three feet in height do not require an adult to accompany them.
4. funnel cake
5. soft pretzel
6. 35 people
7. 705 people

Show What You Know

1. 3,726 steps
2. 182 feet
3. 325 feet
4. D
5. C
6. True
7. False
8. False