Number Sense

Unit 7: Division

Lesson 40: Standard Algorithm & Word Problems

Objective
*Divide two-digit numbers by one-digit numbers using the standard division algorithm.
*Apply the operational sense acquired to date to solve real-world, multi-step word problems. NS4-43 and NS4-44

Complete *all* OR *a selection* of the following activities

Warm-up: What's the Share?

Materials: Counters (e.g., coins, beans, buttons), small paper plates or bowls

Instructions:

- Pose a playful scenario: "You have 24 coins and 4 treasure chests. How can you divide the coins fairly?"
- Have students physically divide the objects (24 ÷ 4).
  Repeat with different numbers: 36 ÷ 6, 42 ÷ 7, 18 ÷ 3.

Discuss:

- *What do you notice about the process?*
- *How might we record this without moving things around?*

Teaching Activity A: Standard Division Detective

Goal: Teach and practice the standard division algorithm.

Instructions:

- Model on board (or whiteboard/video at home):
  E.g., 84 ÷ 4
  Break down into steps:
  ➤ 8 ÷ 4 = 2 → write 2 on top
  ➤ Multiply 2 × 4 = 8 → subtract
  ➤ Bring down the 4 → 4 ÷ 4 = 1
  ➤ Final answer = 21
- Students practice with 3-4 problems in their notebooks, using scaffolding grids (provided at school or as a printable at home).

Options::

- Use base ten blocks or drawings for visual support.
- Students record both the algorithm and a model (e.g., groups or number lines).

Teaching Activity B: Seed Distribution Dilemma

Scenarios:

- You're helping a community garden prepare for spring. You have 96 carrot seeds. Each row needs 8. But you also have 72 beet seeds, and each row needs 6. How many rows can you plant in total?
- 56 books for 7 shelves, then 42 for 6 shelves—how many shelves total?
- 88 mushrooms harvested, 11 go to each household. How many families?

Steps:

Let them draw, act out, or model with items if at home. Encourage *justifying each step* out loud or in a journal:

> "I divided 72 by 6 because each row needs 6, and that told me how many rows I can plant."

Real-Life Anchoring: Math in the World and Life

Scenario:
You are running a lemonade stand and need to divide supplies:

- 96 cups ÷ 8 cups per sleeve = ? sleeves
- 54 lemons ÷ 6 per jug = ? jugs

- 36 cookies ÷ 4 per bag = ? bags

Student Task:

- Solve each problem using the standard algorithm.
- Explain their reasoning: Why did you divide this way? What does the number you found represent?”

Exploration Stations: Playing with Math

Division Dominoes: Match two-digit ÷ one-digit problems with correct answers.

Code Breakers: Use division to decode secret messages (e.g., 72 ÷ 9 = 8, and 8 = H in the message).

Create a Problem: Students make their own word problem using division and trade with a partner.

Math Chef: Scale down a recipe that serves 8 to just 4 (divide ingredients). Kids use drawings or real measurements at home.

Questions for Understanding: Perspective-taking and application

- ☐ Two students both solved 84 ÷ 4 but got different answers. One got 22, and one got 21. Which answer(s) is a close estimate? Which is exact? How do you know?
- ☐ If I have 90 cookies, and I want to share them with either 9 kids or 10 kids, how does the number change? When would one way be better than the other?

Wrap-Up Reflection: Learning into life

- ☐ Where in the real world might you need to divide things fairly? When have you had to share, group, or split things?”
    - ☐ **Options for Expression**:
        - ☐ Write a short reflection
        - ☐ Draw a comic strip of a character solving a division problem

☐ Share in conversation or record an audio note

Extend Learning: Creative Invitation

Instructions:

- Students create a short illustrated story, song, or poem where a character uses division to solve a problem (e.g., planning a party, feeding animals, organizing supplies).
- Must include:
    - A division equation
    - A character
    - A real-life setting
    - A creative or silly twist (e.g., “The Pizza Squirrel divided his stash among forest friends”)

JUMP Math 4.1 Lessons
NS4-43 and NS4-44

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Lesson co-created by Open AI (2025), [Aiden Cinnamon Tea, Chat GPT 4.5], Jump Math Teacher Resources, Meghan McMillen and Laura Mann @ NIDES, August 2025.