

# Patterns & Algebra

## Unit 4: Patterns

### **Lesson 26: Operations Sequences**

#### **Objective**

\*Find differences in addition and subtraction sequences mentally, by counting on fingers or by using a number line.

\*Solve simple problems using increasing sequences.

\*Find the multiplier between two numbers by skip counting on fingers or using multiplication charts.

\*Extend addition, subtraction, and multiplication sequences. [PA4-5](#), [PA4-6](#), and [PA4-7](#)

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

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#### **Warm-up:** Clap, Count, and Skip Count

##### **Instructions:**

- Start with simple **counting-on** and **skip counting** out loud with movement.
- Count by:
  - 2s to 20
  - 5s to 50
  - 10s to 100
  - 3s or 4s with finger taps or claps
- Display these on a number line or track progress using fingers.

**Prompt:** What patterns do you see? How do your fingers help you count? What's the difference between the numbers each time?

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#### **Teaching Activity A:** What's the Difference?

##### **Instructions:**

1. Present these sequences:

- 3, 6, 9, \_\_, \_\_
- 25, 20, 15, \_\_, \_\_
- 40, 50, 60, \_\_, \_\_

2. Ask:

- What's the difference between each term?
- Is the sequence increasing or decreasing?
- What strategy did you use to find the difference?

3. Have students:

- Complete the sequences
  - Use a number line, fingers, or a hundreds chart
  - Write the rule in words (e.g., "Add 10 each time")
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## Teaching Activity B: Skip, Stretch, Multiply

### Materials:

- Floor tiles
- Chalk numbers
- A multiplication chart
- Or just fingers and rhythm!

### Instructions:

- Skip count by 3s from 0 to 30
- Now count by 4s—what changes?

### Ask:

- What number comes at the same time in both skip counts?
- Introduce the **multiplier**:
  - If  $3 \times 4 = 12$ , then 12 is in both the 3s and 4s sequences.

### Practice:

- Find the multiplier between 4 and 16 (count by 4s)
- Find the multiplier between 5 and 35
- Extend patterns forward *and* backward

Let students use the **chart, fingers, or claps**—all pathways are honored.

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## **Real-Life Anchoring:** Math in the World and Life

Scenarios:

- You plant 4 sunflower seeds each day. By Day 6, how many seeds?
- Each chair has 4 legs. If we see 5 chairs, how many legs?
- You sell lemonade for \$3 per cup. How much if you sell 8?

Have students:

- Write a growing sequence
- Draw a number line
- Find the rule: “+3 each time” or “ $\times 4$ ”

Ask:

What do these patterns help us plan, measure, or imagine?

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## **Exploration Stations:** Playing with Math

Number Line Hop: Jump along a floor number line in steps of 2, 3, or 5. Record the pattern.

Skip Count Snake: Connect skip counting bubbles to form number snakes with patterns (e.g., +4, +6).

Match the Multiplier: Use flashcards with number pairs and match them to multiplication facts.

Mystery Rule Maker: Students create a sequence and others must guess the rule.

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## **Questions for Understanding:** Perspective-taking and application

- ☐ The sequence is 6, 12, 18, \_\_\_\_\_. What do you notice? How can you figure out what comes next using your fingers or a number chart?

- ☐ Two friends count: one says 'add 5 each time,' the other says 'skip count by 5.' Are they both right? Why or why not?
  - ☐ Describe the strategies that you use for skip counting? How would you teach a peer who is learning about skip counting with numbers 2-9?
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## **Wrap-Up Reflection:** Learning into life

- ☐ What helped you figure out the rules in today's number patterns?
  - ☐ When you count on your fingers or move along a number line, how does your body help your mind "see" the difference or the jump between numbers?
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## **Extend Learning:** Creative Invitation

### **Pattern Beats**

Create a rhythm for skip counts:

- Clap, stomp, tap for each number in a sequence
  - Record or perform a "multiplication remix"
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### **JUMP Math 4.1 Lessons**

[PA4-5](#), [PA4-6](#), and [PA4-7](#)

Find differences in addition and subtraction sequences mentally, by counting on fingers or by using a number line. Solve simple problems using increasing sequences. Find the multiplier between two numbers by skip counting on fingers or using multiplication charts. Extend addition, subtraction, and multiplication sequences.

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.