

Learning Target: Describe, extend, and complete number patterns.

Success Criteria:

- I can describe a pattern.
- I can write a rule for a pattern.
- I can extend and complete a pattern.

Think and Grow

Example Write a rule for the pattern. Write the missing numbers.

This pattern starts at 50. Each number is 25 more than the previous number.

50, 75, 100, 125, _____, _____, _____

The rule is _____.

Example Write a rule for the pattern. Write the missing numbers.

1, 2, 4, 8, _____, _____, _____

The rule is _____.

This pattern starts at 1. Each number is 2 times as many as the previous number.

Show and Grow

Write a rule for the pattern. Write the missing numbers.

1. 6, 18, 30, 42, _____, _____, _____

2. 720, 620, 520, 420, _____, _____, _____

3. 3, 6, 12, 24, _____, _____, _____

4. 190, 182, 174, 166, _____, _____, _____

Practice

Name _____

Write a rule for the pattern. Write the missing numbers.

5. 17, 37, 57, 77, _____, _____, _____

6. 591, 541, 491, 441, _____, _____, _____

7. 63, 56, 49, 42, _____, _____, _____

8. 3, 12, 21, 30, _____, _____, _____

9. 5, 10, 20, 40, _____, _____

10. 1, 3, 9, 27, _____, _____

Complete the pattern. Write the missing numbers.

11. 120, 133, _____, 159, _____, _____, 198

12. 210, _____, 180, 165, _____, 135, _____

13. **Open-Ended** Choose a number to start a pattern. Write a rule. Then write the next 5 numbers in the pattern.

14. **YOU BE THE TEACHER** Your friend says that the rule for the pattern is "Multiply by 8." Is your friend correct? Explain.

8, 16, 24, 32, 40

15. **Modeling Real Life** The first row of a display has 5 candles. Each row has 4 more candles than the previous row. How many candles are in the sixth row?



16. **Modeling Real Life** Your class recycles 4 cans the first week. Each week, your class recycles 3 times as many cans as the previous week. How many cans will your class recycle the fourth week?



Iurii Garmash/iStock/Getty Images Plus