

**MY Homework****Lesson 3****Sequences****Homework Helper**Need help? [connectED.mcgraw-hill.com](http://connectED.mcgraw-hill.com)

**Extend the pattern described below by four terms.  
Then, note two observations about the pattern.**

Use repeated subtraction to extend the pattern.

**First Term: 46**

$$\begin{array}{r}
 46 \\
 -7 \\
 \hline
 39
 \end{array}
 \begin{array}{r}
 39 \\
 -7 \\
 \hline
 32
 \end{array}
 \begin{array}{r}
 32 \\
 -7 \\
 \hline
 25
 \end{array}
 \begin{array}{r}
 25 \\
 -7 \\
 \hline
 18
 \end{array}$$

**Rule: Subtract 7**

So, the sequence is 46, 39, 32, 25, and 18.

The terms in the sequence decrease. The terms in the sequence also alternate between even and odd numbers.

**Practice**

**Extend each pattern by four terms. Write an observation about the pattern.**

1. Rule: add 8

Pattern: 5, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Observation: \_\_\_\_\_

2. Rule: multiply by 2

Pattern: 3, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Observation: \_\_\_\_\_

3. Rule: subtract 20

Pattern: 175, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Observation: \_\_\_\_\_

4. Extend the pattern below by four terms. Write an observation about the pattern.

Rule: multiply by 10

Pattern: 26, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Observation: \_\_\_\_\_

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## Problem Solving

- Mathematical PRACTICE 8** **Look for a Pattern** Brad puts an equal amount of money in his savings account once a month. He started with \$25. The next month, he had \$35 in his account. Two months after that, he had \$55 in his account. How much money will Brad have in his account after 6 months? Describe a rule. Then solve.
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6. On Monday, a toy store sold 4 race cars. On Tuesday, it sold 8 race cars. On Wednesday, it sold 16 race cars. Suppose this pattern continues. How many race cars will be sold on Friday? Describe a rule. Then solve.
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## Vocabulary Check



Write a vocabulary word to complete each sentence.

sequence    term

7. Each number in a numeric pattern is a \_\_\_\_\_.
8. A \_\_\_\_\_ is the ordered arrangement of terms that make up a pattern.

## Test Practice

9. Identify the next term in the sequence. 171, 141, 111, 81, \_\_\_\_\_
- (A) 61      (B) 51      (C) 41      (D) 31