MY Homework

Homework Helper

eHelp

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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

Rule: Subtract 7

$$
\begin{array}{ccccccc}
46 & \nearrow & 39 & \nearrow & 32 & \nearrow & 25 \\
-\ 7 & & -\ 7 & & -\ 7 & & -\ 7 \\
\hline
39 & & 32 & & 25 & & 18
\end{array}
$$

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   Sample observations: 1–3

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

1. Rule: add 8

   Pattern: 5, __13__, __21__, __29__, __37__

   Observation: __All terms in the sequence are odd numbers.__

2. Rule: multiply by 2

   Pattern: 3, __6__, __12__, __24__, __48__

   Observation: __All terms in the sequence are multiples of 3.__

3. Rule: subtract 20

   Pattern: 175, __155__, __135__, __115__, __95__

   Observation: __All terms in the sequence have a 5 in the ones place.__

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

Rule: multiply by 10

Pattern: 26, __**260**__ , __**2,600**__ , __**26,000**__ , __**260,000**__

Observation: __**Sample observation: Each consecutive term has an**__

__**additional zero.**__

Real World Problem Solving

5. **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.

The rule is add $10; $75

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.

multiply by 2; 64 race cars

Vocabulary Check

Write a vocabulary word to complete each sentence.

sequence   term

7. Each number in a numeric pattern is a __**term**__ .

8. A __**sequence**__ 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, _____

Ⓐ 61   Ⓑ 51   Ⓒ 41   Ⓓ 31

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