1-4 Additional Practice

Inductive Reasoning

For Exercises 1 and 2, find a pattern for each sequence. Use the pattern to find the next two terms.

1. 5, 11, 18, 26, _____, _____, …

   Pattern: _____

2. B, D, F, H, J, _____, _____, …

   Pattern: _____

Make a conjecture for each scenario. Show your work.

3. the square of an even number

4. the product of two odd numbers and a multiple of 2

Find one counterexample to show that each conjecture is false.

5. For two real numbers a and b, a is either equal to b or greater than b.

6. All quadrilaterals are parallelograms.

For each conjecture, verify it with several more examples or find a counterexample to disprove it.

7. For whole number n, n^3 will be odd if n is odd and even if n is even.

8. **Understand** Consider this statement: All families go to the movies together. What is required to prove that the statement is false?

9. **Apply** A farmer keeps track of the water his livestock uses each month. How can he use his data to predict the amount of water used in August?

Livestock Water Use by Month