

Name: _____

Find the next item in each pattern.

1. 1, 2, 4, 8, ...
2. 66, 61, 56, 51, ...

Show each conjecture is false with a counterexample.

3. All quadrilaterals have four right angles.
4. For any real number x , $|x| > 0$.

Complete the conjecture.

5. The sum of an even number and an odd number is _____.

Inductive or deductive reasoning?

6. Every crow Maria has observed is black, so she concludes that all crows are black.
7. All squares are rhombi. QRST is a square. Therefore QRST is a rhombus.

Determine whether each conjecture is valid. Name the law used.

8. Given: If it is Tuesday, then the cafeteria serves tacos. It is Tuesday. Conjecture: The cafeteria serves tacos.
9. Given: If a shape is a circle, then it has no vertices. Shape Z has no vertices. Conjecture: Shape Z is a circle.
10. Given: If a quadrilateral is a square, then it has four congruent sides. If a quadrilateral has four congruent sides, then it is a rhombus. Conjecture: If a quadrilateral is a square, then it is a rhombus.