

# Math Review: Is This Always True?

BibleMouse.com

## Understanding Mathematical Reasoning and Proof

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Answer the following questions based on what you learned about mathematical statements.

1. What is the difference between always true, sometimes true, and never true statements in mathematics?

---

---

---

2. Which of the following is an example of an always true statement?

- A.  $2 + 2 = 4$
- B.  $2 + 2 = 5$
- C. Some birds can swim

3. Sometimes true statements work in all situations.

- True       False

4. The prudent gives thought to his \_\_\_\_.

5. How can we test if a mathematical statement is always true?

- A. By guessing
- B. By proving it with examples
- C. By asking a friend

6. How is careful reasoning similar to spiritual discernment?

---

---

---

7. Mathematical conjectures can be proven true or false.

- True       False

8. Which statement is an example of a never true statement?

- A. All even numbers are prime
- B. Some triangles are not closed shapes
- C. The sum of two odd numbers is always even

9. We can use \_\_\_\_ to develop our critical thinking skills.

10. What is a conjecture and how can it be tested?

---

---

---

---

### Answer Key

1. Always true statements hold for all cases, sometimes true statements work in some situations, and never true statements are incorrect in all cases. 2.  $2 + 2 = 4$  3. False 4. steps 5. By proving it with examples 6. Both require analyzing information deeply and not accepting things at face value. Careful reasoning helps us make informed decisions, just like spiritual discernment helps us understand God's will. 7. True 8. All even numbers are prime 9. reasoning 10. A conjecture is an educated guess about a mathematical statement. It can be tested by using examples, experiments, or logical reasoning to see if it holds true in all cases.