Lesson 1.3 Practice: Conditional Statements

School Launch · Geometry · Unit 1: Foundations: Logic and the Axiomatic Method · Worksheet A

Calculator allowed

Name _____ Date _____ Score _____ / 10

Show your work under each problem, one step per line, and check your answer. Word problems: name the unknown, write the equation, solve, and answer in a sentence with units.

1. Statement: “If two angles are vertical angles, then they are congruent.” Write its converse. EASY

2. Statement: “If a quadrilateral is a rectangle, then it is a square.” Write its converse. EASY

3. Statement: “If an angle measures 90°, then it is a right angle.” Write its converse. EASY

4. Statement: “If a number is even, then it is divisible by 4.” Write its converse and decide whether the converse is true. MEDIUM

5. Statement: “If $x = 3$, then $x^2 = 9$.” Write its converse and decide whether the converse is true. MEDIUM

6. Statement: “If a polygon is a triangle, then it has three sides.” Write its converse and decide whether the converse is true. MEDIUM

7. Statement: “If a quadrilateral is a rectangle, then it is a square.” Write its converse and decide whether the converse is true. MEDIUM

8. Statement: “If $x = 3$, then $x^2 = 9$.” Is the statement true? Is its converse true? If both are true, write the biconditional. HARD

9. Statement: “If an angle measures 90°, then it is a right angle.” Is the statement true? Is its converse true? If both are true, write the biconditional. HARD

10. Statement: “If a number is even, then it is divisible by 4.” Is the statement true? Is its converse true? If both are true, write the biconditional. HARD