Lesson 1.2 Practice: Inductive and Deductive Reasoning

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. Use inductive reasoning: the pattern begins $5, 10, 20, 40, \ldots$ Predict term 6. EASY

2. Use inductive reasoning: the pattern begins $7, 14, 28, 56, \ldots$ Predict term 6. EASY

3. Use inductive reasoning: the pattern begins $7, 10, 13, 16, \ldots$ Predict term 6. EASY

4. Use inductive reasoning: the pattern begins $64, 81, 100, 121, \ldots$ Predict term 10 and describe the rule. MEDIUM

5. Use inductive reasoning: the pattern begins $1, 4, 9, 16, \ldots$ Predict term 12 and describe the rule. MEDIUM

6. Use inductive reasoning: the pattern begins $1, 2, 4, 8, \ldots$ Predict term 11 and describe the rule. MEDIUM

7. Use inductive reasoning: the pattern begins $8, 12, 16, 20, \ldots$ Predict term 13 and describe the rule. MEDIUM

8. Use inductive reasoning: the pattern begins $3, 6, 10, 15, \ldots$ Predict term 10 and describe the rule. HARD

9. Use inductive reasoning: the pattern begins $5, 7, 9, 11, \ldots$ Predict term 12 and describe the rule. HARD

10. Use inductive reasoning: the pattern begins $1, 3, 6, 10, \ldots$ Predict term 12 and describe the rule. HARD