

1. 21, 25, 29
2. 45, 66, 91
3. 21, 34, 55
4. Jason will get poison ivy.
5. Inductive.
6. Gina is taller than Cassie.
7. Trigger likes oats.
8.  $\triangle ABC$  is isosceles.
9. If  $2 \sphericalangle$ s are a linear pair, then their sum is  $180^\circ$ .
10. Deductive.
11. If I finish my homework.
12. I can go to the game.



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# GEOMETRY

## The Complete Course

Lesson Three

## Inductive Reasoning & Deductive Reasoning

KA8463

## Worksheet

Instructors may duplicate the worksheets as needed

## I. VIDEOTAPE FOLLOW-UP QUESTIONS

### I. Introduction.

### II. Inductive Reasoning.

- A. Definition
- B. Examples using real life situations
- C. Examples using numbers
- D. Examples using geometric figures

### III. Conditional Statements.

- A. Defining conditional statements
  1. Conditionals
  2. "If...then..." statements
    - a) hypothesis
    - b) conclusion
- B. Use of venn diagrams.
- C. Converting statements into conditionals
  1. Use of if
  2. Use of only if
  3. Use of if and only if

### IV. Deductive Reasoning.

- A. Definition
- B. Examples using real life situations
- C. Examples using numbers
- D. Examples using geometric figures

## II. SUPPLEMENTARY EXERCISES

1. The next three numbers in the sequence 1, 5, 9, 13, 17, ... are \_\_\_\_, \_\_\_\_, \_\_\_\_
2. The next three numbers in the sequence 1, 6, 15, 28, ... are \_\_\_\_, \_\_\_\_, \_\_\_\_
3. The next three numbers in the sequence 1, 2, 3, 5, 8, 13, ... are \_\_\_\_, \_\_\_\_, \_\_\_\_
4. Every time Jason goes camping in the woods, he gets poison ivy. Jason is going camping this weekend. What is the conclusion?
5. The method of reasoning used in questions 1 - 4 is \_\_\_\_?

### 6-9 State a conclusion based on the given facts.

6. Gina is taller than Libby. Libby is taller than Cassie.
7. All horses like oats. Trigger is a horse.
8. If two angles of a triangle are congruent, then the triangle is isosceles. In triangle ABC,  $\angle A \cong \angle C$ .
9. If two angles are a linear pair, then they are supplementary. If two angles are supplementary, then their sum is  $180^\circ$ .
10. The method of reasoning used in questions 6-9 is \_\_\_\_\_?

### 11-12 Consider the following statement:

"I can go to the game if I finish my homework."

11. State the hypothesis of the statement.
12. State the conclusion of the statement.