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Module 9 Characteristics of Geometric Shapes

## Guided

Practice
Lesson 5 Inductive and Deductive Reasoning

## Set 1

(1) Draw the next figure in the sequence.


The sum of the numbers from one to 10 is 55 . The sum of the numbers from 11 to 20 is 155 . The sum of the numbers from 21 to 30 is 255 . According to this pattern, what is the sum of the

| Numbers | Sum |
| :--- | :--- |
| $1-10$ | $\mathbf{5 5}$ |
| $11-20$ | $\mathbf{1 5 5}$ |
| $21-30$ | 255 | numbers from 91 to 100 ?

(3) Since bisecting means to divide into two congruent parts, find a counterexample to the following conjecture:

When any angle is bisected, two acute angles are formed.

## Set 2

(1) Given that $\angle 1 \cong \angle 2$, prove that $l$ is perpendicular to $m$.

(2) Given that $M$ is the midpoint of $\overline{A B}$, prove that $A M=\frac{1}{2} A B$.

