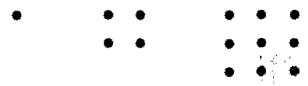
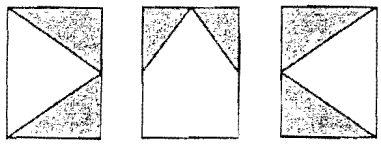
Practice 1.1 Geometry

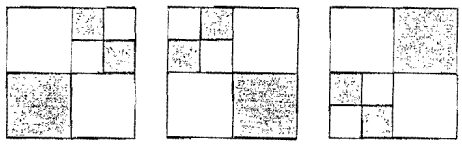
Name_____

Sketch the next figure in the pattern.

1. 

2. 

3. 

4. 

Describe a pattern in the sequence of numbers. Predict the next number.

5. 113, 224, 335, 446, . . .

6. 5, 7, 10, 14, 19, . . .

7. $\frac{1}{2}, \frac{3}{3}, \frac{5}{4}, \frac{7}{5}, \ldots$

8. $\frac{5}{6}, \frac{4}{5}, \frac{3}{4}, \frac{2}{3}, \ldots$

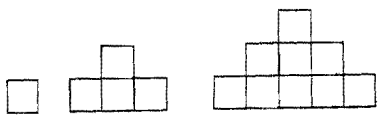
9. 4, 0, −4, −8, . . .

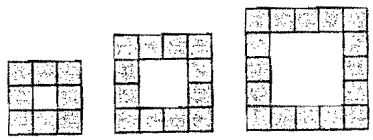
10. 4, 9, 16, 25, . . .

11. 2, 5, 11, 23, . . .

12. 2, 3, 5, 7, 11, . . .

The first three objects in a pattern are shown. How many squares are in the next object?

13. 

14. 

Show the conjecture is false by finding a counterexample.

15. The quotient of two whole numbers is a whole number.

16. The difference of the absolute value of two numbers is positive, meaning $|a| - |b| > 0$.

17. If $m \neq -1$, then $\frac{m}{m+1} < 1$.