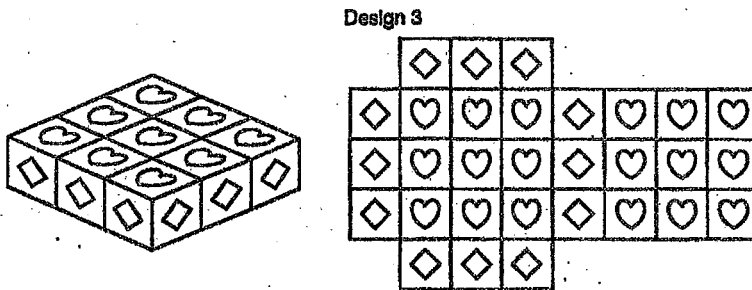
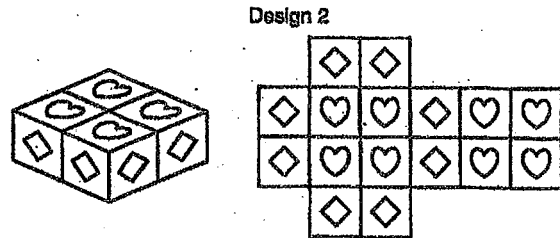
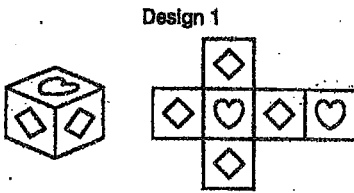


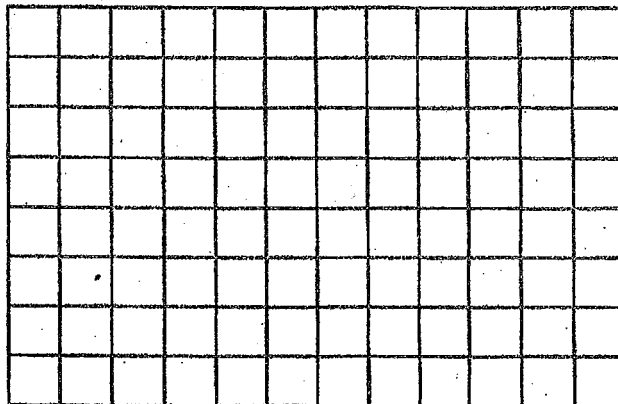
Name \_\_\_\_\_ Date \_\_\_\_\_

**Patterns: They're Grrrrrowing!**  
**Exploring and Analyzing Patterns**

1. A jewelry box company offers simple jewelry boxes with decorative tiles. The top and bottom of each box are adorned with heart tiles while the sides consist of diamond tiles. Pictures of the first 3 jewelry box designs and their corresponding tile layouts are shown.



a. Sketch the tile layout for Design 4 on the grid provided.



b. Analyze the jewelry box designs. Describe as many patterns as you can.

c. Determine a method you can use to calculate the number of diamond tiles, the number of heart tiles, and the total number of tiles used for any design.

d. The company has 4 times as many heart tiles as they have diamond tiles in their inventory. The owner decides to advertise a sale on the box design which uses 4 times as many heart tiles as diamond tiles. Determine which design the owner will have the sale on.

**3**