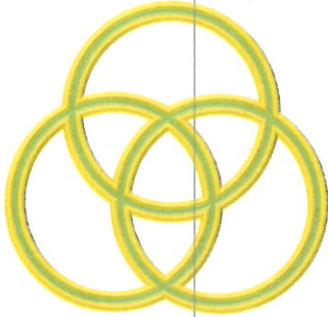


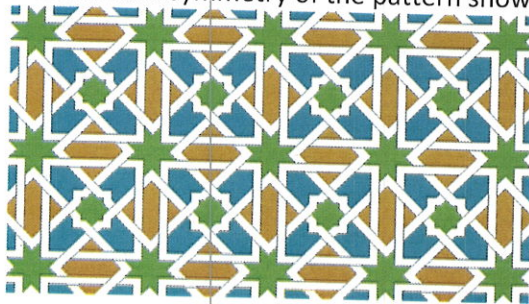
Instructions: Show all work. Use exact answers unless otherwise directed to round.

1. Describe, and notate, the symmetry of the shape below.



D_3

2. Describe the symmetry of the pattern shown.

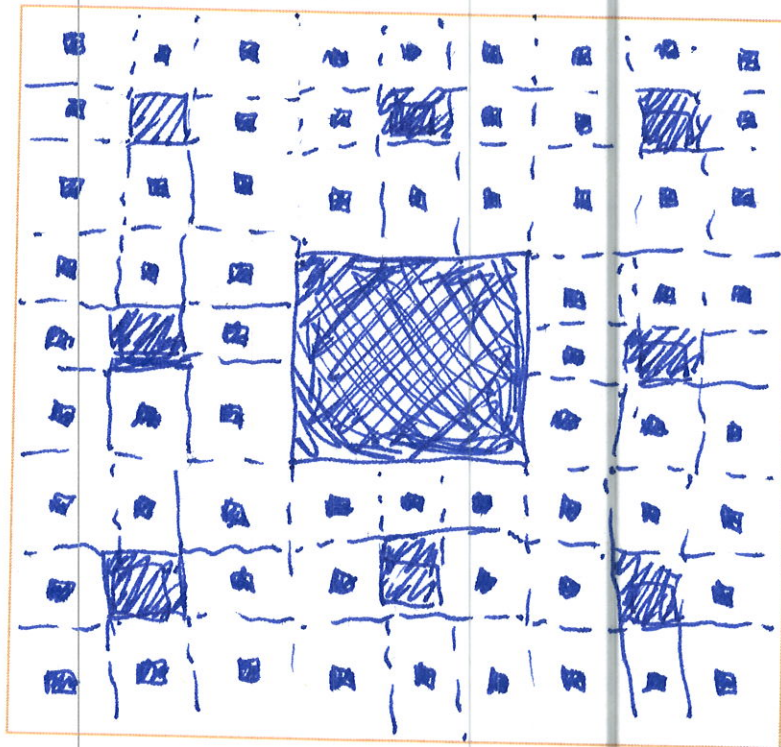


translation $\leftrightarrow \downarrow \nearrow \nwarrow$

reflection (none if you carefully look at white overlaps)

rotations 4

3. Draw three steps of the Sierpinski Carpet.



4. Consider the sequence $A_N = \frac{4N}{N+3}$. Write the first five terms of the sequence.

$$0, 1, \frac{8}{5}, \frac{12}{6} = 2, \frac{16}{7}, \frac{20}{8} = \frac{10}{4} = \frac{5}{2}$$

$A_0, A_1, A_2, A_3, A_4, A_5$

5. Consider the sequence 12, 15, 18, 21, 24, Write an equation for the sequence.

$$A_n = 12 + 3(n-1) \quad A_1 = 12$$

or

$$A_n = 3 + A_{n-1}$$