

Rotational Symmetry

finding figures with rotational symmetry and their orders

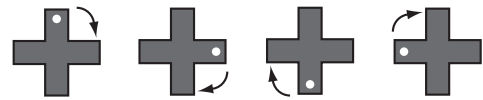
Cut out the shapes. Then identify the shapes that have rotational symmetry and record the orders.


1.	Has Rotational Symmetry Yes / No	Order
A	_____	_____
B	_____	_____
C	_____	_____
D	_____	_____

Order of Rotational Symmetry

Make a full turn of a figure. If it coincides with itself 4 times, it has a rotational symmetry of order 4.

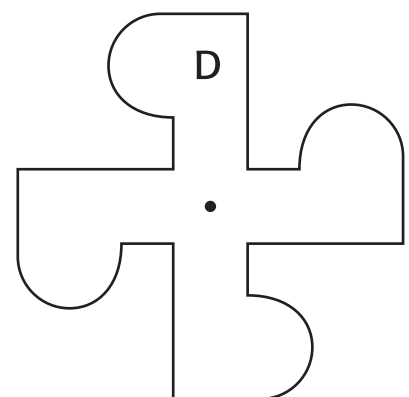
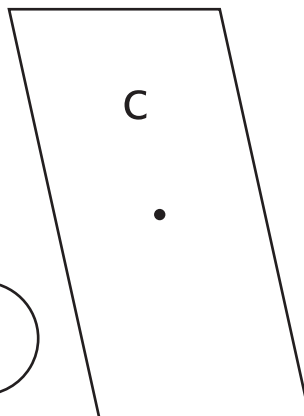
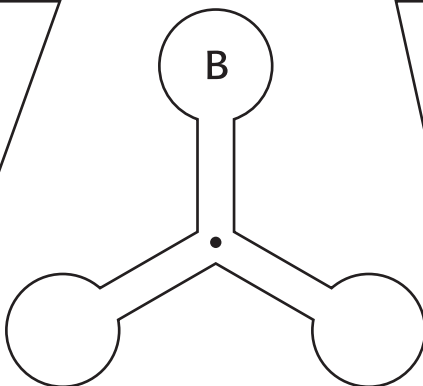
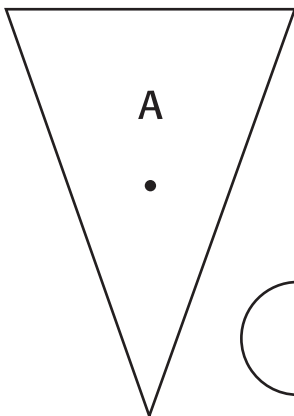
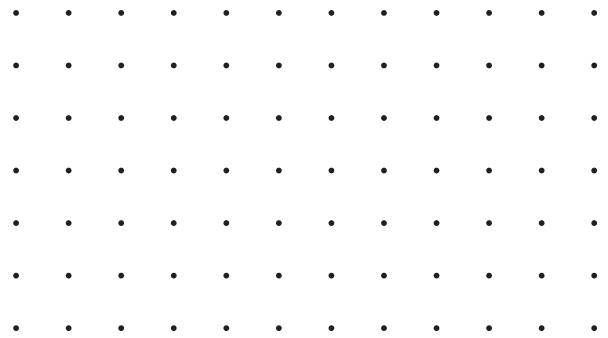
e.g. Make a full turn.



 has a rotational symmetry of order 4.

Draw and label the figures.

- 2. P: a figure with rotational symmetry of order 4
- Q: a figure with rotational symmetry of order 2 and 2 lines of symmetry



Number Patterns

matching the number patterns with the pattern rules, finding the next two terms, and writing pattern rules for Input/Output machines

Match the pattern rules with the number patterns. Write the letters. Then find the next 2 terms.

1. 6, 18, 42, 90, _____, _____
2. 5, 9, 21, 57, _____, _____
3. 2, 5, 11, 23, _____, _____
4. 52, 98, 190, 374, _____, _____
5. 128, 192, 288, 432, _____, _____

A $\times 2, + 1$

B $+ 3, \times 2$

C $- 2, \times 3$

D $- 3, \times 2$

E $\div 2, \times 3$

Find the outputs. Write the pattern rules for the input and the output. Then find the 10th input and output.

6.

Input	Output
5	
7	
9	
11	

Pattern rule

- input: _____
- output: _____

The 10th:
input output

7.

Input	Output
12	
13	
14	
15	

Pattern rule

- input: _____
- output: _____

The 10th:
input output