

COLOR COMBINATIONS

INTRODUCING THE QUESTION

1. On the overhead projector, show a blue rhombus, a green triangle, and a red trapezoid in a row. **Can you rearrange these blocks to make a different color order?** Show one student's suggestion of a different order.



2. Have pairs work with their Pattern Blocks to look for all the different orders. **Do you think there are more ways to rearrange these blocks?** There are 6 different orders.
3. After students have identified the different orders for the 3 blocks, introduce the question. **Suppose there are 4 different blocks. Use 1 yellow hexagon, 1 blue rhombus, 1 red trapezoid, and 1 green triangle. How many different orders of color do you think there are?** Allow students to make their predictions. **Record each way you find. Explain why you think you have found all the possible orders.**

QUESTIONS FOR DISCUSSION

- How many different colors did you find?
- Did you organize your work? If so, in what way? Was it helpful?
- Did anyone use another strategy while searching for all the different color orders?
- Did anyone find a different number of orders?
- How did you make sure you didn't count the same order twice?
- How can you be sure you found all the orders possible?
- Are there more color orders with 4 colors than you expected? Explain your thinking. Why do you think that is the case?

[Source: 20 Thinking Questions for Pattern Blocks Grades 3-6, Creative Publications]