

## Real Number Hexagon

Materials: Colored Pencils in the following colors: Orange  
Blue  
Purple  
Green  
Red  
Yellow

Copy of the Real Number Hexagon (one per student)

### Procedure:

1. Put students in groups of 4 – 5.
2. Give each student a copy of the real number hexagon.
3. Assign each group a specific set of numbers and a color OR assign each member in the group a specific set of numbers and a color.

### Number Sets and Colors

- Irrational Numbers: Blue
- Rational Numbers: Orange
- Rational Numbers that are not integers: Purple
- All Integers: Green
- Integers that are not Whole Numbers: Red
- Whole Numbers: Yellow

4. Within a group, have students compare their hexagons when finished coloring, OR have different groups compare their hexagons once all assigned numbers are colored. Hold one sheet behind the other and make comparisons. Students should discuss any differences that occur and determine which is correct.

### Assessment Questions:

Compare the sheets with the specified numbers sets / colors by holding one sheet behind the other. Think about the numbers which overlap (colored on both sheets), did not get colored on either sheet, or were only colored on one sheet. *For each comparison explain why the similarities / differences occurred.*

1. Irrational Numbers (blue) to Rational Numbers (orange)
2. Rational Numbers (orange) to All Integers (green)
3. Whole Numbers (yellow) to All Integers (green)
4. Integers that are not Whole Numbers (red) to All Integers (green)
5. Rational Numbers that are not Integers (purple) to Whole Numbers (yellow)

These questions could be divided between groups, which then report out to the class or assigned as class work for all students and then discussed as a whole class.

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