

Rational #'s VS Irrational #'s

Unit 1: Extending the Number System

For each of the following numbers:

- a) Does the number given fall under the Rational #'s or the Irrational #'s?
- b) List all of the other subsets that the number fall under.
- c) Explain your answer for part a)

1. The number $\sqrt[3]{9}$

2. The number e

3. The number $\sqrt{961}$

4. The number 2.5964359643...

5. The number 4

6. In your own words, what does it mean for a number to be rational?

7. In your own words, what does it mean for a number to be irrational?

8. Is it possible for a number to be both rational and irrational at the same time? If so, provide an example.

9. What subsets of numbers will always be rational numbers as well?

10. What subsets of numbers will always be irrational numbers as well?