

G8 Playlist: Approximating Irrational Numbers

Aligns with *CCSS.MATH.CONTENT.8.NS.A.2*: Use rational approximations of irrational numbers to compare the size of irrational numbers, locate them approximately on a number line diagram, and estimate the value of expressions (e.g., π^2). For example, by truncating the decimal expansion of $\sqrt{2}$, show that $\sqrt{2}$ is between 1 and 2, then between 1.4 and 1.5, and explain how to continue on to get better approximations.

Related Standards

- *CCSS.MATH.CONTENT.8.NS.A.1*: Know that numbers that are not rational are called irrational. Understand informally that every number has a decimal expansion; for rational numbers show that the decimal expansion repeats eventually, and convert a decimal expansion which repeats eventually into a rational number.

PREVIEW



Objectives

In this module, you will learn and practice the following skills:

- Use rational numbers to approximate the location of irrational numbers on a number line.
- Use rational numbers to compare irrational numbers.
- Use rational numbers to approximate the value of expressions with irrational numbers.

Let's get started!

Key Terms

- A **rational number** is any number that can be written as the ratio of two integers, $\frac{a}{b}$, where b is not 0.
- An **irrational number** is a number that cannot be written as the ratio of two integers.

