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| Know that there are numbers that are not rational, and approximate them by rational numbers. | |
| **8.NS.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. | **8.NS.1.a** I understand that numbers that are not rational are called irrational and every number has a decimal expansion.  **For example:** , ,  **8.NS.1.b** I can convert a rational number into its decimal form, and I can convert a repeating decimal into its fractional form. |
| **8.NS.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., π2). *For example, by truncating the decimal expansion of √2, show that √2* *is between 1and 2, then between 1.4 and 1.5, and explain how to continue on to get better approximations.* | **8.NS.2.a** I can use rational approximations of irrational numbers to compare the size of irrational numbers.  **8.NS.2.b** I canapproximate the location of irrational numbers on a number line.  **For example:** By truncating the decimal expansion of , show that  is between 1 and 2, then between 1.4 and 1.5, and explain how to continue on to get better approximations.  **8.NS.2.c** I can estimate the value of an expression that involves irrational numbers.  **For example:** Estimate π2 |