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| **Clarity for Learning** | | | |
| **Standard KY.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. | | | |
| **Concepts (Nouns)**  rational approximations  irrational numbers  number line diagram  value of expressions | | **Skills (Verbs)**  use  compare  locate  estimate | |
| **Learning Progressions**  *Prerequisite Skills:*   * understand and use decimals * add, subtract, multiply, and divide rational integers * compare and order rational numbers * simplify expressions   *Grade Level Skills:*   * use color tiles, dot paper, desmos, or other hands-on activities to understand why square numbers are actually square, (area of a square is side x side) and generate a list of perfect squares using hands-on materials. * Use a perfect square to approximate a square root that is an irrational number. * Use a number line to compare and order rational and irrational numbers. * Understand the difference between terminating and repeating decimals and their relationship to rational and irrational numbers.   *Clarifications:*  For example, by shortening the decimal expansion of √2 by dropping all decimals past a certain point and showing √2 is between 1 and 2, then between 1.4 and 1.5 and so on. Students recognize this process could be repeated an infinite number of times.  KY.8.NS.2→ KY.HS.N.3 | | | |
| **Learning Intentions (I am learning to...)** | | **Success Criteria (I know I’m successful when...)** | |
| Understand irrational numbers. | | * I can identify that a number is rational or irrational. * I can determine if a decimal is terminating or repeating. * I can compare and order rational and irrational numbers. | |