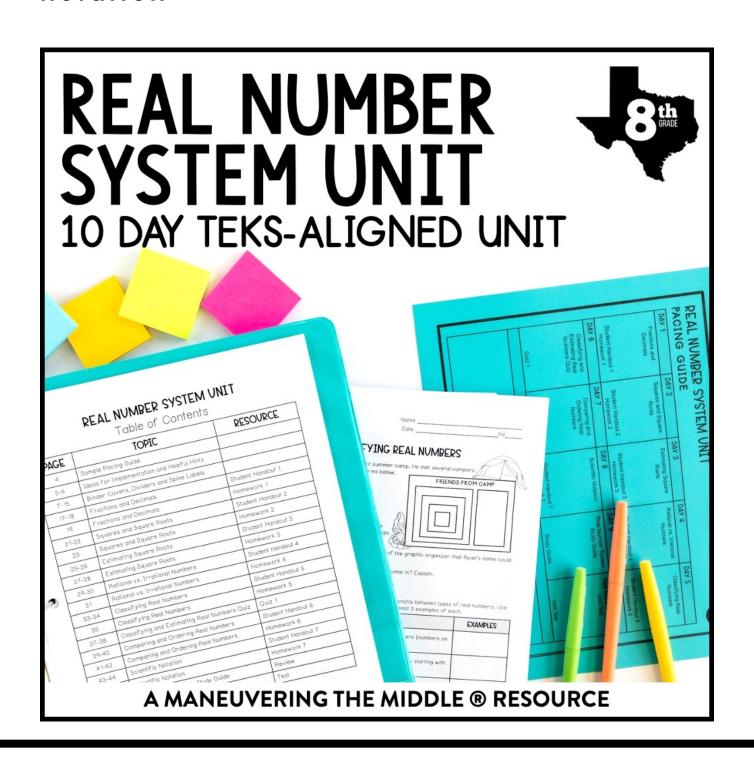
#### learning focus:

- approximate the value of an irrational number and locate the value on a number line
- classify, compare, and order real numbers
- convert between standard and scientific notation





a 10 day TEKS-aligned unit TEKS: 8.2A, 8.2B, 8.2C, 8.2D

# ready-to-go, scaffolded student materials

#### REAL NUMBER SYSTEM UNIT

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a 10 day TEKS-aligned unit TEKS: 8.2A, 8.2B, 8.2C, 8.2D

# student friendly + real-world application

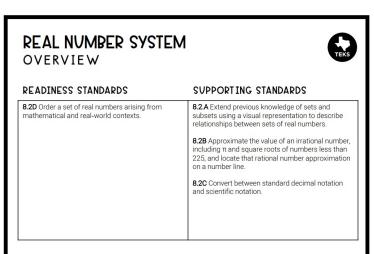
or an upcoming proje	FRACTIONS each checked out at the	Name		scaffolded concepts
hether comparing, c	To convert a fra divide the	CONVERTING DECIMALS TO FRACTIONS Onger a c	rt a decimal to a fraction, put the decimal on a numerator and denominator byudecimal in the numerator. Then,udecidant fraction form	over and until there is noyour fraction.
TYPES OF DECIMALS	A decimal that er  A decimal with a		Unit: Real Number System Homework 1	NamePd
convert each fraction.		10. 0.888	1. Which of the following fract a repeating decimal?  a. $\frac{7}{8}$	ACTIONS AND DECIMALS
4 प	5.	Use your knowledge of converting  13. Amber has \$5.55 in her pocket	b. $\frac{3}{5}$ c. $\frac{5}{2}$ d. $\frac{2}{q}$ In 3-8, record the letter of the representation. Not all conds we	b. $\frac{7}{2}$ c. $\frac{1}{4}$ d. $\frac{13}{11}$
		this amount as a fraction in simple  15. Trish entered a problem on her "0.1894528". Would this decimal	$ \begin{array}{c c} A & 8 & C & 4 \\ \hline  & 12 & \hline  & 8 & D \end{array} $	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
	[	Summarize today's lesson:		7. 8. 0.625 8. alent fractions and decimals as shown. Circle the name of the
ror	anal	ysis	student who made a mistake an SHAWNA $\frac{1}{33} = 0.\overline{03}$	nd rewrite their statement correctly.  KEITH SOREN $0.04 = \frac{2}{5}$ $\frac{5}{6} = 0.8\overline{3}$

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10 day TEKS-aligned unit TEKS: 8.2A, 8.2B, 8.2C, 8.2D

## streamline your planning process with unit overviews





vertical alignment

#### **BIG IDEAS**

- All real numbers can be be
- All real numbers are either Numbers can be represen
- the two forms.

#### **ESSENTIAL QUESTIO**

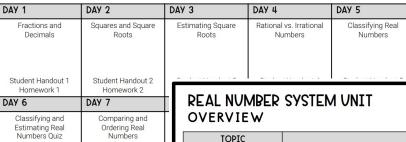
- · When is it useful to order a
- · How are sets of real number
- · How can the value of an irra
- · Where do you see irrational
- What are some advantages

#### REAL NUMBER SYSTEM UNIT PACING GUIDE

Student Handout 6

Homework 6

Ouiz 1



sample pacing calendar



TOPIC	TEACHING TIPS			
Fractions and Decimals	Begin the lesson with a discussion about when it is more helpful to use fractions vs. decimals in the real-world, and vice versa.			
Squares and Square Roots	Have students cut out squares from graph paper to look at the relationship between the area of a square and the side length of the square. This is also a good way to show students that only certain numbers are "perfect squares."			
Rational vs. Irrational Numbers	Display a list of rational and irrational values on the board before teaching the lesson and have students predict and record which numbers they think are irrational. Then, come back to the list at the conclusion of the lesson to compare their predictions with their learning.			
Classifying Real Numbers	Display a large image of a graphic organizer for the sets of real numbers on the board. Then, have students write a real number on a sticky note. They can then give their sticky note to a classmate to place in the correct section of the graphic organizer.			
Comparing and Ordering Real Numbers	Give students an index card with a value written on it (fraction, decimal, square root, integer, etc.) and have them order themselves in a line. This could be done within small groups or as an entire class.			
Scientific Notation	Display a very large or small value (ex. The distance from earth to the moon is 15,130,000,000,000 inches) and have students volunteer to try to read the value out loud. Then, discuss when scientific notation can be helpful.			

teaching ideas

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#### unit study guide + assessments

Unit: Real Number System Quiz 1	Name Date	Pd	√ quizzes	
QUIZ: CLASSIFYING AND EST  Answer each question and show work w  1. Which of the following represents a decimal with a value less than one?	rhen necessary.	Answers 1 2 3 4.	√ editable	e unit tes
a. $\frac{1}{2}$ b. $\frac{4}{3}$ c. $\frac{9}{10}$ 2. Which of the following sets does not a. $\{-5.12, \pi, 30\}$ b. $\{\sqrt{80}, 100, 6.56\}$	C.	Date  UMPER SYSTEM  elow. These represent the nore help with a topic.	types of questions on your test. Be sure	
3. Raphael's neighborhood kiddie pool i approximate side length of the pool? (B  4. Heather is putting together a square I bulletin board is 196 cm². What is the tot	a) $2\sqrt{49} =$ b) $-\sqrt{100} =$ c) $10 + \sqrt{169} =$	-		
<ol> <li>Estimate the value of √13. (Between</li> <li>Which of the following correctly clast belongs?</li> <li>a. Real, Irrational</li> </ol>	4. Between which two whole numbers does √150 lie?  I CAN LOCATE IRRATIONAL NUMB  7. Shiloh estimated √190 by pl	5. \\ tru a. b. c. d. d.  DERS ON acing t	EIGHTH GRADE CURR	MBEB
b. Real, Rational, Integer	the number line below. Explain could be improved.  13  9. The point below best represent the following?	14	SYSTE UNIT ONE: ANSWE	
	a. √80 b. √72	9 c.		
answer included	<del>-</del>	7	@MANEUVERING THE MIDDL	.E, 2017

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