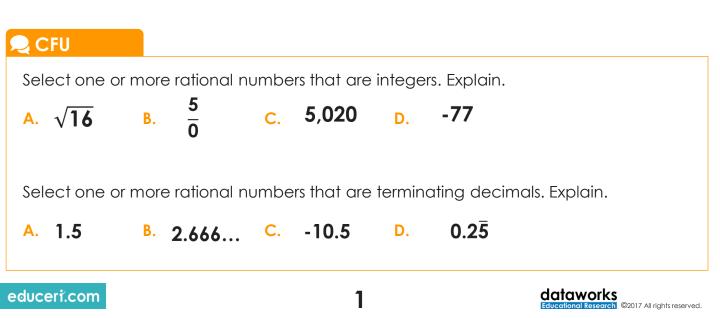
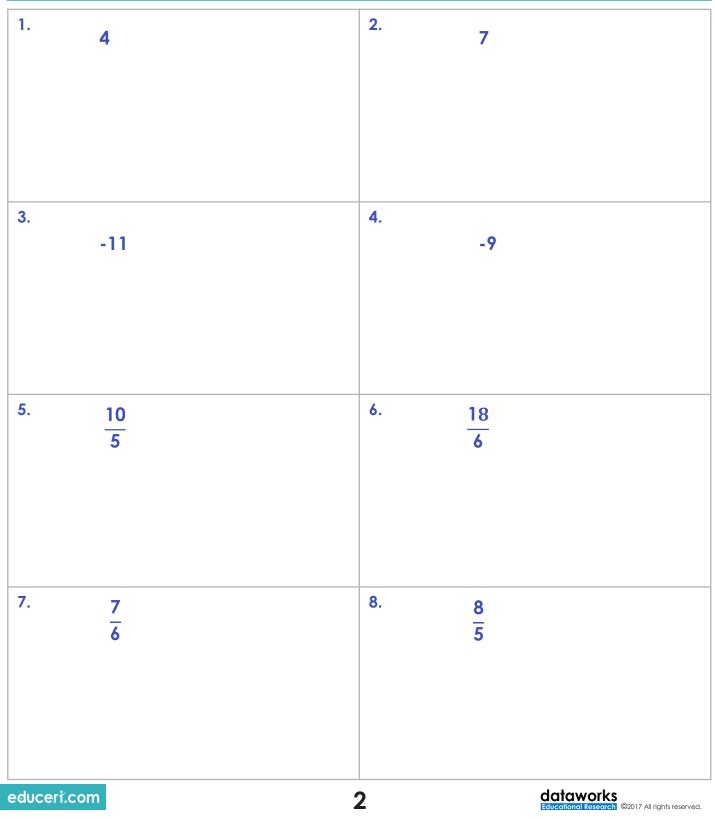
A rational number is any number that can be written as a fraction.

An **irrational number** cannot be written as a fraction.

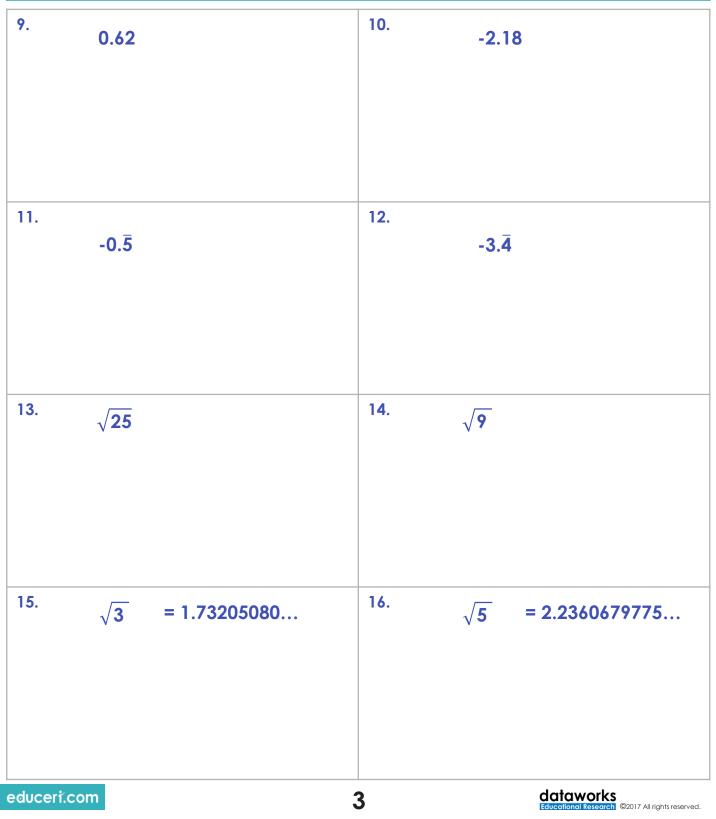
	Rational Numbers			
Integers (not fraction)	Terminating Decimals	Repeating Decimals	decimal goes indefinitely without a repeating pattern	
$3 = \frac{3}{1}$	$1.4 = \frac{7}{5}$	$.\overline{3}=\frac{1}{3}$	√ <mark>2</mark> = 1.4142…	
$\sqrt{4} = \frac{2}{1}$	$-1.5 = \frac{-3}{2}$	$.\overline{123} = \frac{41}{333}$	π = 3.14159	
$5^2 = \frac{25}{1}$	$3.79 = \frac{379}{100}$	$\overline{18} = \frac{-2}{11}$	π = 3.1415926 535897932384	
$0 = \frac{0}{1}$			62640	
$-12 = \frac{-12}{1}$	All terminating decimals are rational	All repeating decimals are rational		



- 1 If possible, write the number as a fraction in simplest form.
- 2 Classify the number as rational or irrational. If it is rational, classify it as an integer, a terminating decimal, or a repeating decimal.
- 3 Interpret the answer. (" ____ is ____ because...")

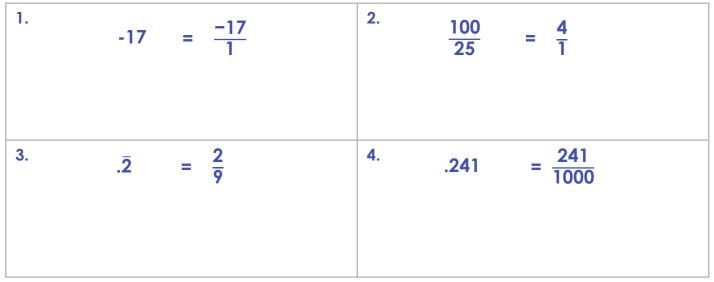


- 1 If possible, write the number as a fraction in simplest form.
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Skill Closure

- 1 If possible, write the number as a fraction in simplest form.
- 2 Classify the number as **rational** or **irrational**. If it is rational, classify it as an **integer**, a **terminating decimal**, or a **repeating decimal**.
- 3 Interpret the answer. (" _____ is _____ because...")



Concept Closure

Read and solve the problem.

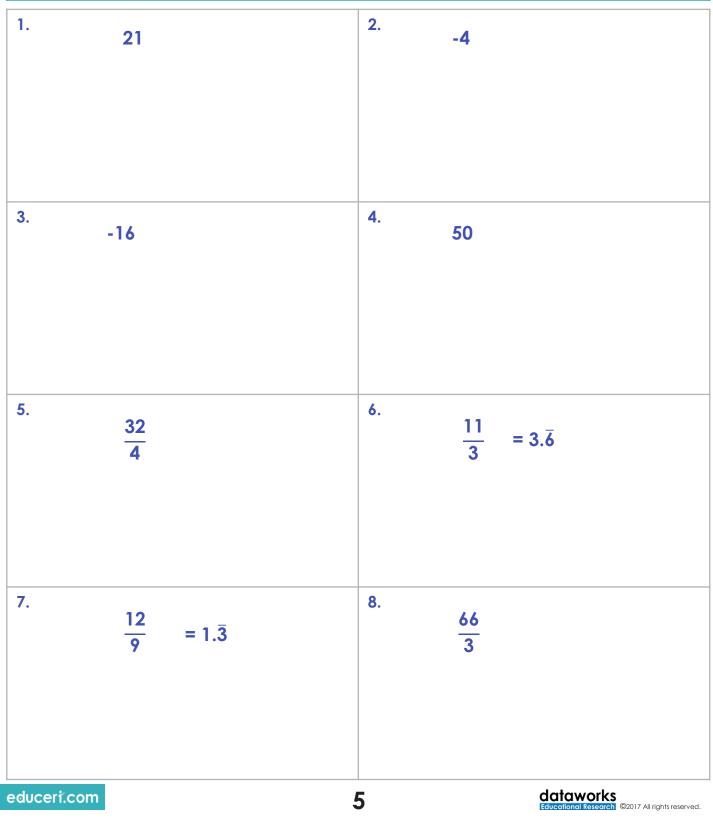
Quinton classified $\sqrt{15}$ as a rational number and an integer. Is he correct? Explain.

Summary Closure

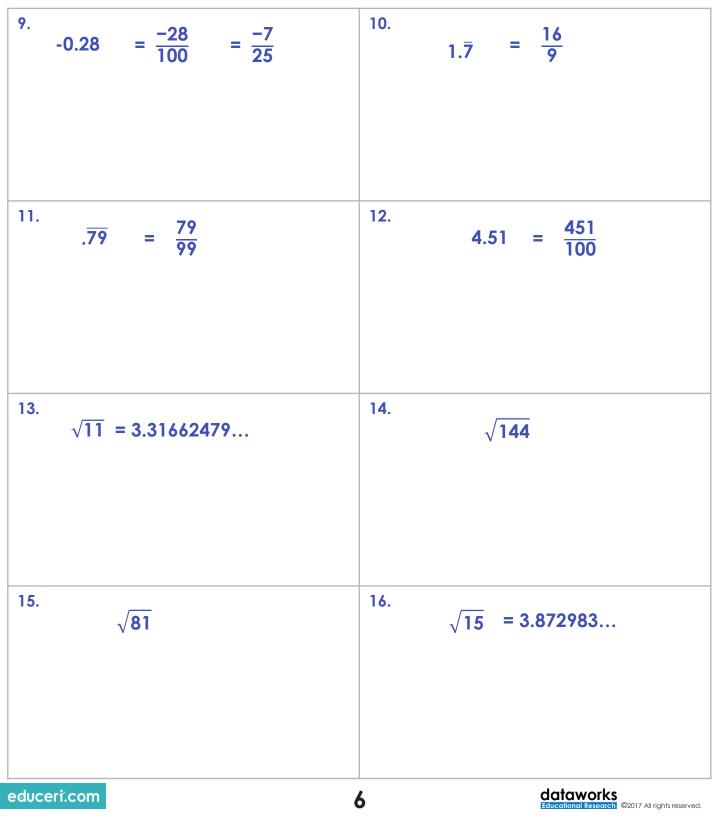
What did you learn today about distinguishing between rational and irrational numbers?



- 1 If possible, write the number as a fraction in simplest form.
- 2 Classify the number as rational or irrational. If it is rational, classify it as an integer, a terminating decimal, or a repeating decimal.
- 3 Interpret the answer. (" ____ is ____ because...")

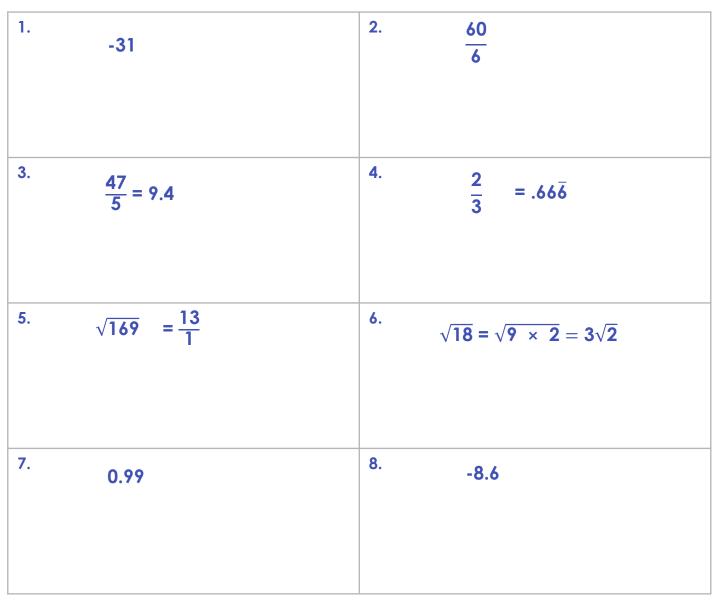


- 1 If possible, write the number as a fraction in simplest form.
- 2 Classify the number as **rational** or **irrational**. If it is rational, classify it as an **integer**, a **terminating decimal**, or a **repeating decimal**.
- 3 Interpret the answer. (" ____ is ____ because...")



Classify numbers as rational or irrational.

If rational, classify as integer, terminating decimal, or repeating decimal.



Choose Yes or No to indicate whether each statement about rational numbers is true or false.

1.	All rational numbers can be written as a ratio of two integers.	O Yes	O No
2.	All rational numbers are integers.	O Yes	O No
3.	All whole numbers are rational numbers.	O Yes	O No
4 .	The number -37.5 is a rational number.	O Yes	O No

Periodic Review 2

Classify numbers as rational or irrational.

If rational, classify as integer, terminating decimal, or repeating decimal.

1.
-44
2.
$$3.\overline{27}$$

3.
 $\frac{15}{5} = 3.75$
4.
 $\sqrt{90} = 3 \times \sqrt{10}$

5.
 $\sqrt{78} = 8.831...$
6.
 $\sqrt{400} = 20$

7.
 $\sqrt{2}$
8.
 5.25

Choose Yes or No to indicate whether each statement about rational numbers is true or false.

All integers are rational numbers.		O Yes O No
All fractions are rational numbers.		O Yes O No
All repeating decimals are rational.		O Yes O No
The number $\sqrt{2}$ is rational.		O Yes O No
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Classify numbers as rational or irrational.

1. √144 = 12	2. √ 46 = 6.7823
3. 33	4. $\frac{33}{10} = 3.3$
5. $\frac{100}{25} = 4$	δ. √101
7. 3.14159	8. 3.14

Choose Yes or No to indicate whether each statement about irrational numbers is true or false.

Irrational numbers cannot be written as a ratio of two integers.	O Yes	O No
All irrational numbers are fractions.	O Yes	O No
All numbers are irrational numbers.	O Yes	O No
The number $\sqrt{100}$ is an irrational number.	O Yes	O No