



Name _____ Date _____

Rational Numbers (Pages 245–248)

A number that can be written as the ratio of two integers is a **rational number**.

Rational Numbers and Simplest Form

- Any number that can be expressed in the form $\frac{a}{b}$, where a and b are integers and $b \neq 0$, is called a rational number.
- A rational number, written as fraction, is in **simplest form** when the GCF of its numerator and denominator is 1.

EXAMPLES

A Is 13 a rational number? Is 2.03?

Yes, because 13 can be written as $\frac{13}{1}$, which is the ratio of two integers.

Yes, because 2.03 can be written as $\frac{203}{100}$, which is the ratio of two integers.

B Write $\frac{12}{20}$ in simplest form.

The GCF of 12 and 20 is 4.

$\frac{12 \div 4}{20 \div 4}$ Divide numerator and denominator by the GCF.

$\frac{3}{5}$ is in simplest form.

Try These Together

1. Name all sets of numbers to which 5 belongs.

HINT: Consider the sets of whole numbers, integers, and rational numbers.

2. Name all sets of numbers to which 2.3 belongs.

HINT: Consider the sets of whole numbers, integers, and rational numbers.

PRACTICE

Name all sets of numbers to which each number belongs.

3. -0.6 4. 19 5. $\frac{1}{4}$ 6. $-\frac{8}{8}$ 7. $4\frac{3}{8}$ 8. -3

Write each fraction in simplest form.

9. $\frac{16}{20}$ 10. $-\frac{8}{24}$ 11. $\frac{26}{36}$ 12. $\frac{44}{55}$
 13. $\frac{30}{150}$ 14. $-\frac{6}{12}$ 15. $\frac{28}{49}$ 16. $-\frac{6}{36}$

17. **School** Fifteen of the 21 students in Mirabel's class are in the band. Write the fraction of students in the band in simplest form.



18. **Standardized Test Practice** Which of these is *not* a rational number?

- A $\frac{-8}{0}$ B $\frac{7}{7}$ C -6 D 5.2

Answers: 1. whole numbers, integers, rational numbers 2. rational numbers 3. rational numbers 4. whole numbers, integers, rational numbers 5. rational numbers 6. integers, rational numbers 7. rational numbers 8. integers, rational numbers 9. $\frac{2}{5}$ 10. $-\frac{1}{3}$ 11. $\frac{13}{18}$ 12. $\frac{5}{4}$ 13. $\frac{5}{1}$ 14. $-\frac{1}{2}$ 15. $\frac{7}{4}$ 16. $-\frac{6}{1}$ 17. $\frac{5}{7}$ 18. A