NAME _____ DATE _____ PERIOD _____

Lesson 1 Reteach

Rational Numbers

To express a fraction as a decimal, divide the numerator by the denominator.

Example 1

Write $\frac{3}{4}$ as a decimal.

$\frac{3}{4}$ means $3 \div 4$.

The fraction $\frac{3}{4}$ can be written as 0.75, since $3 \div 4 = 0.75$.

Example 2

Write -0.16 as a fraction in simplest form.

$-0.16 = -\frac{16}{100}$ 0.16 is 16 hundredths.

$\quad\quad = -\frac{4}{25}$ Simplify.

The decimal -0.16 can be written as $-\frac{4}{25}$.

Example 3

Write $8.\overline{2}$ as a mixed number in simplest form.

Assign a variable to the value $8.\overline{2}$. Let $N = 8.222\ldots$. Then perform the operations on N to determine its value.

$N = 8.\overline{2}$ or $8.222\ldots$

$10(N) = 10(8.222)$	Multiply each side by 10 because 1 digit repeats.
$10N = 82.222\ldots$	Multiplying by 10 moves the decimal point 1 place to the right.
$-N = 8.222\ldots$	Subtract $N = 8.222\ldots$ to eliminate the repeating part.
$9N = 74$	$10N - 1N = 9N$
$\frac{9N}{9} = \frac{74}{9}$	Divide each side by 9.
$N = 8\frac{2}{9}$	Simplify.

The decimal $8.\overline{2}$ can be written as $8\frac{2}{9}$.

Exercises

Write each fraction or mixed number as a decimal.

1. $\frac{2}{5}$ 2. $\frac{3}{10}$ 3. $\frac{7}{8}$ 4. $2\frac{16}{25}$

5. $-\frac{2}{3}$ 6. $-1\frac{2}{9}$ 7. $6\frac{2}{3}$ 8. $-4\frac{3}{11}$

Write each decimal as a fraction or mixed number in simplest form.

9. 0.8 10. -0.15 11. $0.\overline{1}$ 12. $1.\overline{7}$

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Lesson 1 Skills Practice

Rational Numbers

Write each fraction or mixed number as a decimal.

1. $\frac{1}{10}$ 2. $\frac{1}{8}$

3. $-\frac{3}{4}$ 4. $-\frac{4}{5}$

5. $\frac{21}{50}$ 6. $-3\frac{9}{20}$

7. $4\frac{9}{25}$ 8. $\frac{7}{9}$

9. $-1\frac{1}{6}$ 10. $-2\frac{4}{15}$

11. $\frac{5}{33}$ 12. $7\frac{3}{11}$

Write each decimal as a fraction or mixed number in simplest form.

13. 0.9 14. 0.7

15. 0.84 16. -0.92

17. -1.12 18. -5.05

19. -2.35 20. 8.85

21. $-0.\overline{1}$ 22. $4.\overline{8}$

23. $6.\overline{7}$ 24. $-8.\overline{4}$

Course 3 • Chapter 1 Real Numbers