Try It *divide!* Write the fraction or mixed number as a decimal.

1. $-\dfrac{6}{5}$

2. $-7\dfrac{3}{8}$

3. $-\dfrac{3}{11}$

4. $1\dfrac{5}{27}$

-1.2 ↖ terminating ↗

-7.375

$-0.\overline{27}$ ↖ repeating ↗

$1.\overline{185}$

top number divided by bottom

Any terminating decimal can be written as a fraction whose denominator is a power of 10. You can often simplify the resulting fraction by *dividing out* any common factors, which is the same as removing the common factor from the numerator and denominator.

$$0.48 = \frac{48}{100} = \frac{48 \div 4}{100 \div 4} = \frac{12}{25} \qquad \text{or} \qquad 0.48 = \frac{48}{100} = \frac{12 \cdot \cancel{4}}{25 \cdot \cancel{4}} = \frac{12}{25}$$

Example 2 Writing a Terminating Decimal as a Fraction

Write -0.26 as a fraction in simplest form.

Reading

-0.26 is read as "negative twenty-six hundredths."

$-0.26 = -\dfrac{26}{100}$ ← Write the digits after the decimal point in the numerator.

← The last digit is in the hundredths place. So, use 100 in the denominator.

0.6 ↖ the tenths place so a 10 in denominator

$= -\dfrac{13 \cdot \cancel{2}}{50 \cdot \cancel{2}}$ Divide out the common factor, 2.

$= -\dfrac{13}{50}$ Simplify.

▶ So, $-0.26 = -\dfrac{13}{50}$.

$\dfrac{6}{10} = \dfrac{3}{5}$ simplify! Type in the fraction with the abc key and wss here

GO DIGIT

5. −0.3

$=\dfrac{3}{10}$

6. 0.125

$\dfrac{125}{1000}=\dfrac{25}{40}\;\boxed{\dfrac{5}{8}}$

7. −3.1

$-3\dfrac{1}{10}$

8. −10.25

$-10\dfrac{25}{100}=\boxed{-10\dfrac{1}{4}}$

In-Class Practice

1 I don't understand yet.	**2** I can do it with help.	**3** I can do it on my own.	**4** I can teach someone else.

9. WRITING Compare and contrast terminating decimals and repeating decimals.

terminating decimals end
repeating decimals have a pattern that
goes on forever

WRITING A FRACTION OR MIXED NUMBER AS A DECIMAL Write the fraction or mixed number as a decimal.

10. $\dfrac{3}{16}$

0.1875

11. $-\dfrac{7}{15}$

$-0.4\overline{6}$

12. $6\dfrac{17}{20}$

6.85

WRITING A DECIMAL AS A FRACTION OR MIXED NUMBER Write the decimal as a fraction or mixed number in simplest form.

13. 0.6

$\dfrac{6}{10}=\boxed{\dfrac{3}{5}}$

14. −12.48

$-12\dfrac{48}{100}=\boxed{-12\dfrac{12}{25}}$

15. 0.408

$\dfrac{408\div8}{1000\div8}\boxed{\dfrac{51}{125}}$