

7.4 Rename Decimals as Fractions

To rename a decimal as a fraction, follow these steps:

1. Read the given decimal. $0.45 =$ forty-five **hundredths**
2. Determine the denominator. The denominator is **100**.
3. Write an equivalent fraction. forty-five **hundredths** $= \frac{45}{100}$
4. Use the GCF to simplify if necessary.

$$\frac{45}{100} = \frac{45 \div 5}{100 \div 5} = \frac{9}{20}$$

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

1.) $12\overline{.625}$

$$\begin{aligned} \frac{625}{1000} \div 5 &= \frac{125}{200} \div 5 \\ &= \frac{25}{40} \div 5 = \frac{5}{8} \end{aligned}$$

$$12\frac{5}{8}$$

2.) $0\overline{.003}$

$$\frac{3}{1000}$$

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

3.) $0.\overline{325}$

$$\frac{325}{1000} \div 5 = \frac{65}{200} \div 5$$

$$= \frac{13}{40}$$

4.) $4.\overline{108}$

$$\frac{108}{1000} \div 2 = \frac{54}{500} \div 2$$

$$= \frac{27}{250}$$

$$4\frac{27}{250}$$

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

5.) $0.\overline{925}$

$$\frac{925}{1000} \div 25 = \frac{37}{40}$$

6.) $0.\overline{161}$

$$\frac{161}{1000}$$

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

7.) 1.09

$$1 \frac{9}{100}$$

8.) 8.001

$$8 \frac{1}{1000}$$

9.) A truck weighs 132 tons more than another truck. Write the difference in weight as a mixed number in simplest form.

$$\frac{32}{100} \div 2 = \frac{16}{50} \div 2 = \frac{8}{25}$$

$$1 \frac{8}{25}$$