Relate Fractions and Decimals

Fraction can be written as a decimal by dividing the numerator by the denominator.

$$\frac{\text{numerator}}{\text{denominator}} \quad \text{®} \quad \text{denominator}\overline{)\text{numerator}}$$

To write $\frac{4}{5}$ as a decimal, divide 4 by 5.

$$\frac{4}{5} = 5\overline{)4.0} \quad \neg \quad \text{numerator}$$

$$\begin{array}{r} 0.8 \\ 4\,0 \\ \hline 0 \end{array}$$

denominator

Examples:

A- Write each fraction as a decimal.

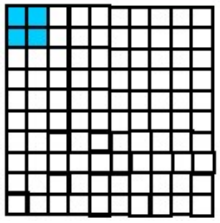
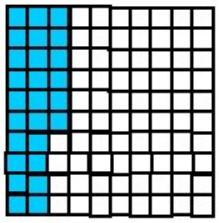
1) $\frac{2}{5} \rightarrow 5\overline{)2.0}$

$$\begin{array}{r} 0.4 \\ 20 \\ \hline 00 \end{array}$$

2) $\frac{6}{8} \rightarrow 8\overline{)6.0}$

$$\begin{array}{r} 0.75 \\ 56 \\ \hline 40 \\ -40 \\ \hline 0 \end{array}$$

You can write a fraction or a decimal to tell what part is shaded.

Model	Fraction	Decimal	Read
	$\frac{4 \text{ shaded parts}}{100 \text{ parts}}$	O T H 0 0 4	four hundredths
	$\frac{26 \text{ shaded parts}}{100 \text{ parts}}$	O T H 0 2 6	Twenty-six hundredths

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Examples:

A- Write each decimal as a fraction.

1) 0.25 $= \frac{1}{4}$

2) 0.333 $= \frac{1}{9}$

3) 1.6 $= \frac{8}{5}$

4) 0.125 $= \frac{9}{72}$

B- Write each fraction as a decimal.

5) $\frac{32}{1{,}000}$ **0.032**

6) $\frac{6}{100}$ **0.06**

7) $\frac{35}{28}$ **1.25**

8) $\frac{8}{40}$ **0.2**