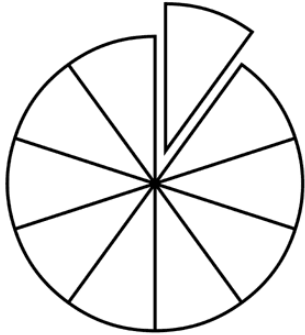


Objective: To Change Decimals into **Fractions**

Date: \_\_\_\_\_

## Fractions = Decimals (page 1)

Don't forget:



$$\frac{4}{10} = 0.4$$

Don't forget: **A fraction is the same as a decimal.**

They both mean: **Part of a whole**

Also, don't forget:

Terminating Decimal: **A decimal that has a remainder of zero**



Example: **0.375, 0.5, 4.25**

Repeating Decimal: **A decimal that never ends (goes on forever)**

Example: **0.333333... =  $0.\bar{3}$**

### A) How do I change a decimal into a fraction?

The Examples:

1) 0.12

$$\frac{12}{100} = \frac{3}{25}$$

2) 23.8

$$23\frac{8}{10} = 23\frac{4}{5}$$

Explanation:

1) **Read** the decimal **out-loud** to hear the **fraction**.

2) **Simplify (Reduce)** when necessary.

**\*\*Don't forget that the decimal point means "AND."**

Objective: To Change Fractions into **Decimals**

## Fractions = Decimals (page 2)

### B) How do I change a fraction into a decimal?

#### The Examples:

3)  $\frac{3}{8} = 0.375$

2)  $7\frac{2}{5} = 7.4$

3)  $\frac{6}{100} = 0.06$

4)  $3\frac{31}{1,000} = 3.031$

5)  $\frac{3}{4} = \frac{75}{100} = 0.75$

6)  $\frac{4}{5} = \frac{8}{10} = 0.8$

#### Explanation:

>>>Don't forget that a **fraction bar** is the same as a **division bar**.

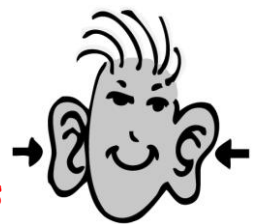
\*A) When in doubt, **DIVIDE!!**

>**Top Dog in the house**

>Keep dividing until the remainder is **ZERO!!!!!!**

\*B) **SOMETIMES**, I can **hear** the **decimal**. Examples:

- **Tenths**
- **Hundredths**
- **Thousandths**
- **Ten-Thousandths**



\*C) **SOMETIMES**, I can change the fraction to something I can **hear**.



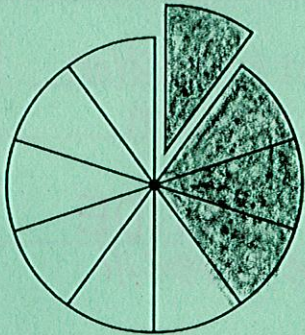
# Lesson 4-5 (p196-200)

Objective: To Change Decimals into fractions

Date: 12/16/09

## Fractions = Decimals (page 1)

Don't forget:



$$\frac{4}{10} = 0.\underset{\text{tenths}}{4}$$

Don't forget: fractions are the same as decimals.

They both mean: part of a whole.

Also, don't forget:

Terminating Decimal: A decimal that ends because it has a remainder of "0".



Example: 0.62, 0.5, 0.19

Repeating Decimal: A decimal that does not end. (goes on forever)

Example: 0.3333333... = 0.\overline{3}    0.62626262... = 0.\overline{62}

### A) How do I change a decimal into a fraction?

The Examples:

1) 0.12

$$\frac{12}{100}$$

$$\begin{array}{r} 2 \overline{) 12} \quad 100 \\ 2 \overline{) 6} \quad 50 \\ \hline 3/25 \end{array}$$

2) 23.8

$$23 \frac{8}{10} = 23 \frac{4}{5}$$

$$\begin{array}{r} 2 \overline{) 8} \quad 10 \\ 4 \overline{) 8} \quad 10 \\ \hline 4/5 \end{array}$$

Explanation:

1) Read the decimal out-loud to hear the fraction.

2) Simplify (Reduce) when necessary.

\*\*Don't forget that the decimal point means "AND."

\*Don't forget the whole number out front.



Objective: To Change Fractions into Decimals

## Fractions = Decimals (page 2)

B) How do I change a fraction into a decimal?

The Examples:

$$3) \frac{3}{8} = 0.375$$

$$\begin{array}{r} .375 \\ 8 \overline{) 3.000} \\ \underline{-24} \phantom{00} \\ 60 \phantom{0} \\ \underline{-56} \phantom{0} \\ 40 \\ \underline{-40} \\ 0 \end{array}$$

$$2) 7\frac{2}{5} = 7.4$$
$$\begin{array}{r} .40 \\ 5 \overline{) 2.0} \\ \underline{-20} \\ 0 \end{array}$$

$$3) \frac{6}{100} = 0.06$$

$$4) 3\frac{31}{1,000} = 3.031$$

$$5) \frac{3 \times 25}{4 \times 25} = \frac{75}{100} = .75$$

$$6) \frac{4 \times 2}{5 \times 2} = \frac{8}{10} = .8$$

Explanation:

>>> Don't forget that a fraction bar is the same as a division bar.

\*\*A) When in doubt, DIVIDE!  
> Top Dog In The House!!!

> Keep dividing until the remainder is zero !!!!!

\*B) SOMETIMES, I can hear the decimal. Examples:

- Tenths
- Hundredths
- Thousandths
- Ten-Thousandths



\*C) SOMETIMES, I can change the fraction to something I can hear.



# Lesson 4-5

## Repeating Decimals (p 196-200) (never-ending)

Change to a repeating decimal:

ex:  $\frac{2}{3} = \overline{.6}$

\* When in doubt, DIVIDE ☺

$$\begin{array}{r} \overline{.666\dots} \\ 3 \overline{) 2.000} \\ \underline{-18} \phantom{00} \\ 20 \phantom{0} \\ \underline{-18} \phantom{0} \\ 20 \\ \underline{-18} \\ 2 \end{array}$$

ex:  $\frac{4}{11} = \overline{.36}$

$$\begin{array}{r} \overline{.3636\dots} \\ 11 \overline{) 4.0000} \\ \underline{-33} \phantom{000} \\ 70 \phantom{0} \\ \underline{-66} \phantom{0} \\ 40 \\ \underline{-33} \\ 70 \end{array}$$

ex:  $6\frac{1}{12} = 6.08\overline{3}$

$$\begin{array}{r} 12 \overline{) 1.00000} \\ \underline{0} \phantom{00000} \\ 100 \phantom{000} \\ \underline{-96} \phantom{00} \\ 40 \phantom{0} \\ \underline{-36} \\ 40 \\ \underline{-36} \\ 40 \end{array}$$

*(Note: The original image includes green arrows pointing from the 0s in the dividend to the 40s in the remainder, and a green box around the final result 6.083̄.)*