

# MARCH 2, 2015 <sup>1<sup>ST</sup></sup> <sub>2<sup>ND</sup></sub> STARTER

The number of girls who do wear a watch  
is double the number who don't.

The number of boys who don't wear a watch  
is double the number who do.

If I tell you the number of girls in the class  
is double the number of boys,  
can you tell me the number I teach? Here's a clue:  
More than 20; below 32!



GALLERY

## 3/2 Converting between Fractions, Decimals, and Percents

Remember these?

Fractions to Decimals

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

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

*bottom* ) *top*

$$4 \frac{5}{9} = 4.\overline{5}$$

$$\begin{array}{r} .5\overline{5} \\ 9 \overline{) 5.00} \\ \underline{45} \phantom{00} \\ 50 \phantom{0} \\ \underline{-45} \phantom{0} \\ 5 \end{array}$$

## Decimals to Fractions

$$\begin{aligned} &0.36 \\ &= \frac{36 \div 4}{100 \div 4} \\ &= \frac{9}{25} \end{aligned}$$

$$\begin{aligned} &2.125 \\ &= 2 \frac{125 \div 5}{1000 \div 5} \\ &= 2 \frac{25 \div 25}{200 \div 25} \\ &= 2 \frac{1}{8} \end{aligned}$$

**SAY it**  
**WRITE it**  
**SIMPLIFY it**

# What does percent mean?

out of 100

$$\frac{\#}{100}$$

then reduce

**Percent**  $\longrightarrow$  **fraction**

$$78\% = \frac{78 \div 2}{100 \div 2}$$
$$= \frac{39}{50}$$

$$24\% = \frac{24 \div 4}{100 \div 4}$$
$$= \frac{6}{25}$$

$$120\% = \frac{120 \div 20}{100 \div 20}$$
$$= \frac{6}{5}$$
$$= 1\frac{1}{5}$$

$$8\% = \frac{8 \div 4}{100 \div 4}$$
$$= \frac{2}{25}$$

## Percents $\longrightarrow$ Decimals

$$\underbrace{45\%}_{\leftarrow} = \frac{45}{100} = 0.45$$

$$\underbrace{105\%}_{\leftarrow} = 1.05$$

$$\underbrace{8\%}_{\leftarrow} = 0.08$$

$$\underbrace{37.5\%}_{\leftarrow} = 0.375$$

*Move decimal  
two places  
to the LEFT*

## Decimals $\longrightarrow$ Percents

$$0.42 = \frac{42}{100} = 42\%$$

$$0.08 = 8\%$$

$$1.23 = 123\%$$

$$5.1 = 510\%$$

Move the decimal  
two places  
to the **RIGHT**

## FRACTION $\longrightarrow$ PERCENT

$$\frac{1}{4} = 25\% \quad \frac{2}{5} = 40\%$$

**DIVIDE** *bottom*  $\overline{)$  *top*  
**THEN MOVE DECIMAL**  
**TWO TO THE RIGHT**

$$\frac{2}{7} = 28\frac{4}{7}\% \quad 1\frac{3}{8} = 137\frac{1}{2}\% \quad 2\frac{4}{9} = 244\frac{4}{9}\%$$

$$\begin{array}{r} 28 \\ 7 \overline{) 2.00} \\ \underline{-14} \phantom{00} \\ 60 \\ \underline{-56} \\ 4 \end{array}$$

$$\begin{array}{r} 37 \\ 8 \overline{) 3.00} \\ \underline{-24} \phantom{00} \\ 60 \\ \underline{-56} \\ 4 \end{array}$$

$$\begin{array}{r} 44 \\ 9 \overline{) 4.00} \\ \underline{-36} \phantom{00} \\ 40 \\ \underline{-36} \\ 4 \end{array}$$

**Fill in the chart. Show your work below.**

$$\frac{36 \div 4}{100 \div 4} = \frac{9}{25}$$

Fraction	Percent	Decimal
$\frac{9}{25}$	36%	0.36
$4\frac{5}{8}$	$462\frac{1}{2}\%$	4.625
$3\frac{7}{25}$	328%	3.28

$$\frac{328}{100} = 3\frac{28}{100} \div 4 = 3\frac{7}{25}$$

$$\begin{array}{r} .625 \\ 8 \overline{) 5.0000} \\ \underline{-48} \phantom{00} \\ 20 \phantom{00} \\ \underline{-16} \phantom{00} \\ 40 \phantom{00} \\ \underline{-40} \\ \hline \end{array}$$



# HOMEWORK

Lilac WS 1

DUE Tuesday