

4.2 Fractions, Decimals, and Percents

After this lesson you will be able to...

- convert between fractions, decimals, and percents

Aug 12-2:08 PM

Fractions, Decimals, and Percents

It is helpful to be able to go back and forth easily between fractions, decimals, and percents, because all throughout school-- high school and beyond -- they'll keep coming back, over and over again.

Lets see how to convert fractions to decimals and percents.

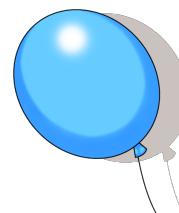
Example: Convert $\frac{1}{20}$ to a decimal and a percent

Fraction to a Decimal: divide the numerator (top number) by the denominator (bottom number)

$$\text{So } 1 \div 20 = 0.05$$

Decimal to a Percent: Move the decimal to the right two places and add a percent sign (%)

$$0.\underline{05} = 5\%$$



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Convert the following fractions to decimals AND a percent

$$\frac{71}{200}$$

$$\frac{15}{31}$$

$$\frac{9}{8}$$

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Converting Decimals to Percents and Fractions

Lets convert 3.26 to a percent and a fraction.

Recall Decimal to Percent: Move the decimal to the right two places and add a percent sign (%)

$$3.26 = 326\%$$

Quick Note! When converting decimals to percents, if the original number (3.26) is greater than 1, then when it's written as a percent it will be bigger than 100%

Percents to Fractions: Drop the % and make a fraction with number on top and 100 on the bottom. Then you need to simplify and reduce your fraction.


$$326\% = \frac{326}{100}$$

simplify and reduce
 how many times does 100 go into 326? What are you left with?

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Convert the following Decimals to Percents and Fractions

0.45	0.125	0.0032
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Aug 4-3:00 PM


Converting Percent to Fractions and Decimals

Let's convert 160% to a decimal and fraction.

Recall Percents to Fractions: Drop the % and make a fraction with number on top and 100 on the bottom. Then you need to simplify and reduce your fraction.


$160\% = \frac{160}{100}$

Now let's convert our fraction into a decimal




numerator ÷ denominator = fraction into decimal

Recall: Drop the % symbol, and put your given number as the numerator and 100 in the denominator.



Try this!



52%

Convert to a fraction and a decimal

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Just so you know...

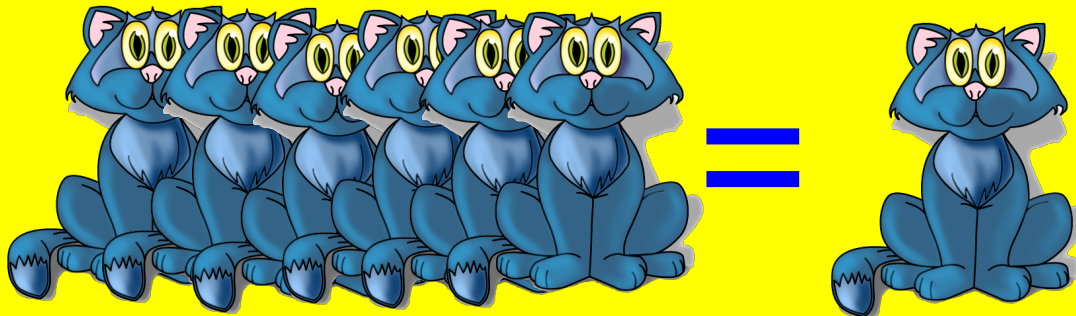
A repeating decimal contains a digit or group of digits that repeat forever.
 You can write a repeating decimal using bar notation.

Example:

0.33333333... can be written as $0.\overline{3}$

or

0.45454545... = $0.\overline{45}$



Sep 9-3:23 PM

Lets try some examples:

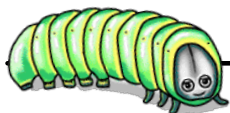
Convert each fraction to a decimal and a percent

a) $\frac{1}{123}$

b) $\frac{56}{200}$

c) $\frac{125}{25}$

Decimal



Percent

Sep 9-3:05 PM

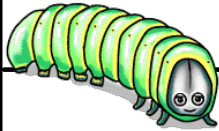
Rewrite each decimal to a percent and a fraction

a) 0.0077

b) 0.34

c) 5.93

Percent



Decimal

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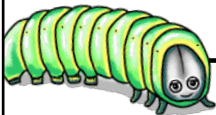
Express each percent as a decimal and a fraction

a) 66.2%

b) 0.77%

c) $84\frac{1}{2}\%$

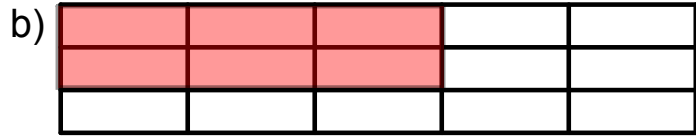
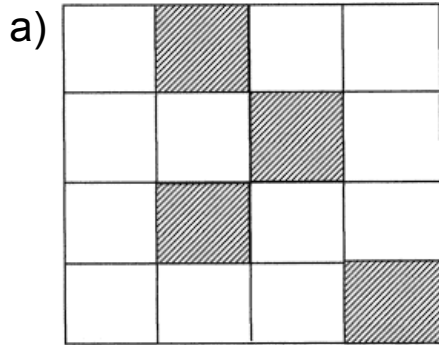
Decimal



Fraction

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Express each shaded portion of each diagram as a fraction, and a decimal, and a percent



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Lets practice what you know

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