

.3131...



FRACTIONS



13/20



DECIMALS



PERCENTS:

90%

25%



“SEA”- ing THE CONNECTIONS



.45

1/2





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<u>Sea-ing the Connection</u>	<u>Fractions to Decimals</u>
<u>Fractions to Percents</u>	<u>Decimals to Fractions</u>
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Sea-ing the Connection

“Fish Food is Brain Food” or tips to remember

- You can use the fact that percent means “out of 100” to rewrite a percent as a fraction
- To write a decimal as a percent, move the decimal point two places to the *right*
- To write a percent as a decimal, move the decimal point two places to the *left*



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Vocabulary

Fraction – a number in the form a/b , for example $2/3$

Percent – a ratio comparing a number to 100, for example 29%
 $= 29/100$

Terminating decimal – a decimal number that ends, for example
.75

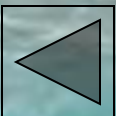
Repeating decimal - a decimal that repeats a pattern of digits,
for example $.121212\dots$

Changing a Fraction to a Decimal

There are two methods to write a fraction as a decimal.

Method 1: Find an equivalent fraction with a denominator of ten, 100, or any other power of ten, for example: $\frac{3}{5} = \frac{60}{100} = .60$

Method 2: Because a fraction indicates division, the numerator of the fraction can be divided by the denominator, for example: $\frac{3}{8} = 3 \text{ divided by } 8 = .375$.



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Now, It's your turn to turn fractions into decimals. Complete the conversions below on your notebook paper with either method. Check your answers by clicking on the fish **after** you've finished all eight problems.

1. $8/25$



2. $34/125$



3. $3/8$



4. $2/3$



5. $7/40$



6. $7/8$



7. $8/11$



8. $15/25$

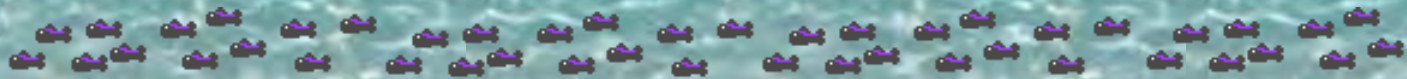


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$$8/25 = .32$$



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$$34/125 = .272$$

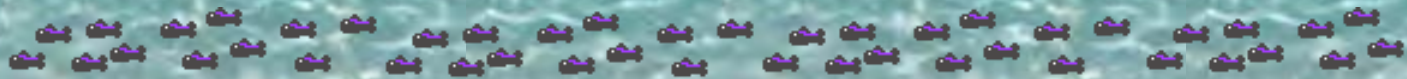


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$$\frac{3}{8} = .375$$

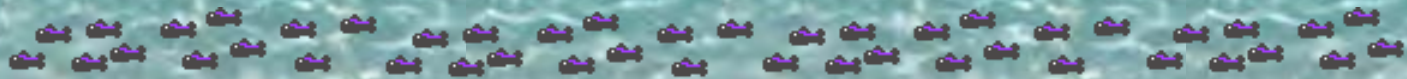


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$$\frac{2}{3} = .6666\dots$$

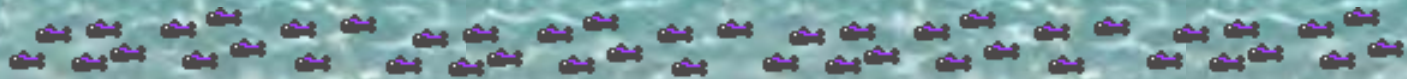


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$$7/40 = .175$$

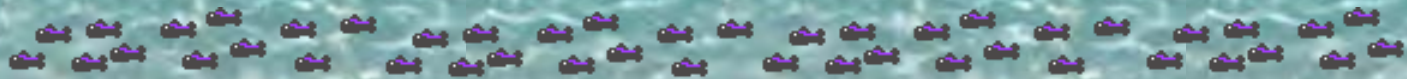


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$$7/8 = .875$$

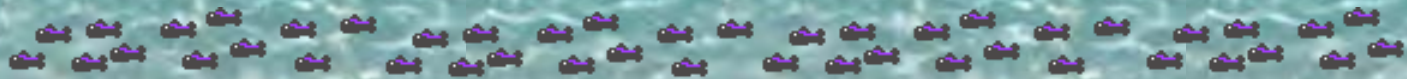


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$$7/40 = .175$$

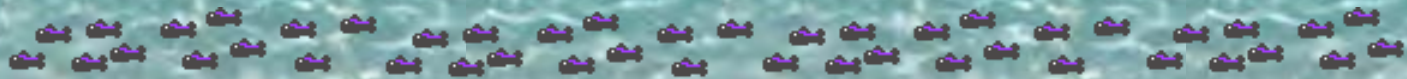


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$$8/11 = .7272\dots$$

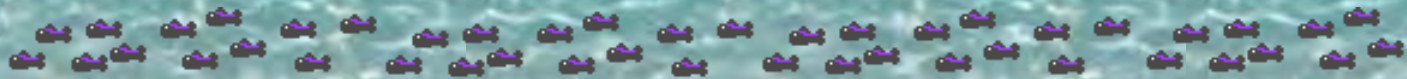


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$$15/25 = .6$$



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Changing a Fraction to a Percent

To express a fraction as a percent, first change the fraction to a decimal and then move the decimal **two** places to the **right** and add the percent sign. For example: $4/5 = 4$ divided by $5 = .8$ or 80%

Now, it's your turn to change a fraction to a percent. Click on the next button to continue



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Convert the following fractions to percents on your notebook paper. Check your answers by clicking on the fish **after** you've finished all five problems.

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



2. $\frac{5}{6}$



3. $\frac{7}{8}$



4. $\frac{1}{20}$



5. $\frac{9}{1000}$



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$$8/25 = 32\%$$



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$$5/6 = 83 \frac{1}{3}\%$$



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$$7/8 = 87.5\%$$

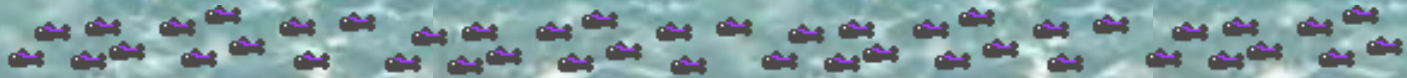


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$$1/20 = 5\%$$

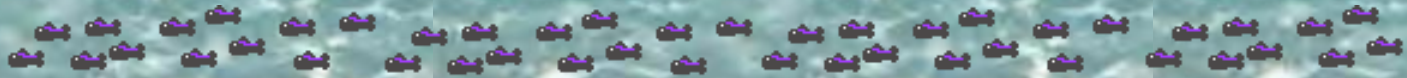


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$$9/1000 = 0.9\%$$



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Changing Decimals to Fractions

To express a decimal as a fraction, first write the decimal with a denominator in a power of 10 indicated by the final digit of the decimal. Then simplify the fraction.

For example: $.45 = 45/100 = 9/20$

Now, it's your turn to change a decimal to a fraction. Click on the next button to continue



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Convert the following decimals to fractions on your notebook paper. Check your answers by clicking on the fish **after** you've finished all five problems.

1. 0.85



2. 0.55



3. 0.625



4. 0.83



5. 0.272

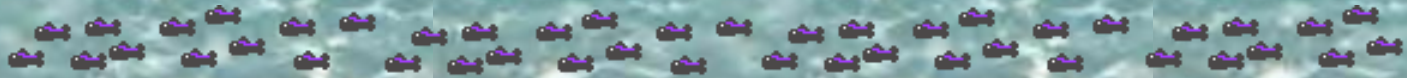


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$$.85 = 17/20$$



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$$.55 = 11/20$$



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$$0.625 = \frac{5}{8}$$



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$$0.83 = 83/100$$

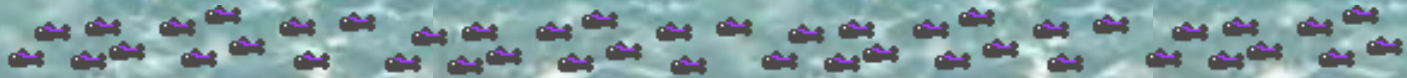


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$$0.272 = 34/125$$



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Changing Decimals to Percents

To express a decimal as a percent, remember that you can write the decimal as a fraction with a denominator of 100. And you also remember that percent is expressed as a number “out of 100”. So, the fraction can be written as a percent.

For example, .75 means $75/100$ which is the same as 75%

Now, it's your turn to change a decimal to a percent. Click on the next button to continue.



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Convert the following decimals to a percent on your notebook paper. Check your answers by clicking on the fish **after** you've finished all five problems.

1. 0.195

2. 0.07

3. 0.0334

4. 0.55

5. 0.01

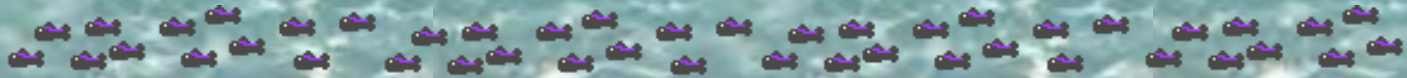


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$$.195 = 19.5\%$$

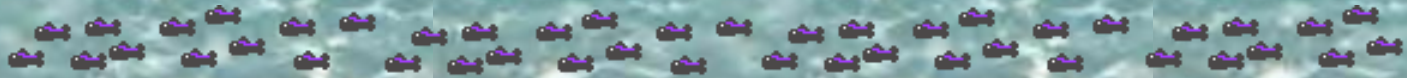


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$$.07 = 7\%$$



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$$.0334 = 3.34\%$$



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$$.55 = 55\%$$



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$$.01 = 1\%$$



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Changing Percents to Decimals

To express a percent as a decimal, you can divide the percent by 100 and remove the percent sign.

Remember, dividing by 100 moves the decimal point two places to the left. The decimal point is understood at the end of a whole number.

For example $25\% = .25$



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Convert the following Percents to decimals on your notebook paper. Check your answers by clicking on the fish **after** you've finished all five problems.

1. 6%



2. 190%



3. $37\frac{3}{4}\%$



4. 40%



5. 100%

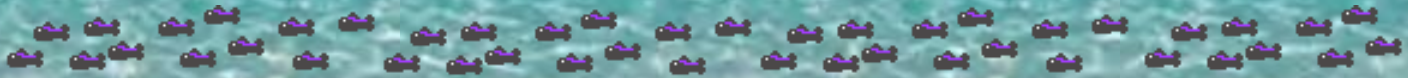


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$$6\% = .06$$

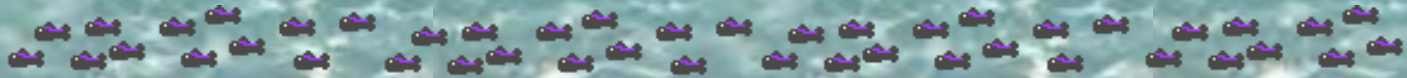


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$$190\% = 1.9$$

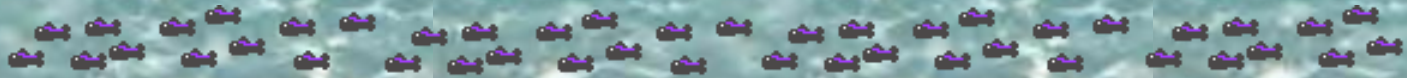


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$$37 \frac{3}{4}\% = .3475$$



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$$40\% = .4$$



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100% = 1



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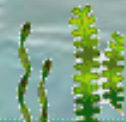
Changing Percents to Fractions

To express a percent as a fraction, write a fraction with a denominator of 100. (Remember, a percent is a number “out of 100.”) Then simplify the fraction into lowest terms.

For example: $65\% = 65/100 = 13/20$.



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Convert the following Percents to fractions on your notebook paper. Check your answers by clicking on the fish **after** you've finished all five problems.

1. 80%



2. 32%



3. 75%



4. $12 \frac{1}{2}\%$



5. 15%

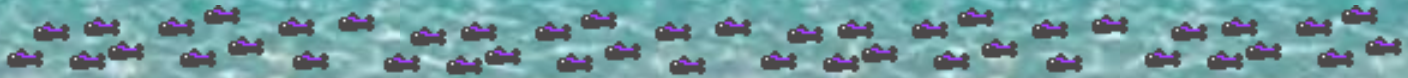


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$$80\% = \frac{4}{5}$$

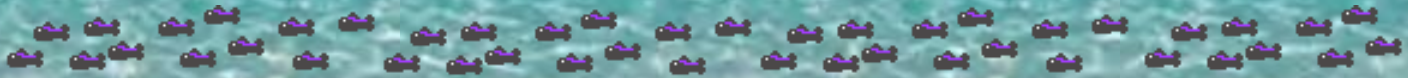


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$$32\% = 8/25$$

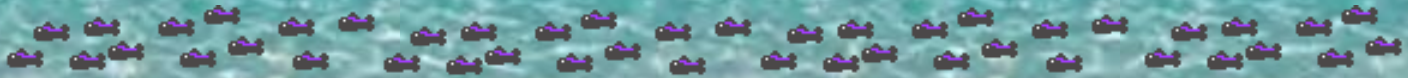


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$$75\% = \frac{3}{4}$$

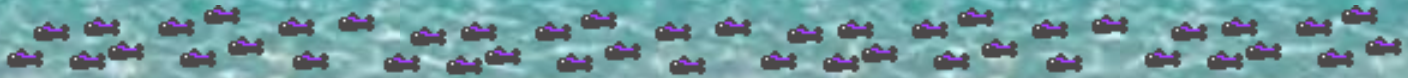


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$$12 \frac{1}{2}\% = \frac{1}{8}$$

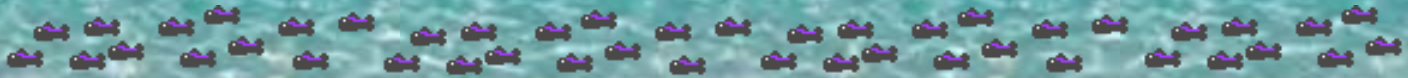


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$$15\% = 3/20$$



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Fishing for a game

Click on the Fish Bowl and Go Fish!(A matching
game of Equivalent Fractions, Decimals, and
Percents)



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Fishing for math links

While you're surfing the web, dive into these swimming holes to learn more about fractions, decimals, and percents or any other math topic.

- [Meter Math resources](#)
- [Ask Dr. Math](#)
- [Saloon Snap](#) - A BBC Education Game of conversion (lots of fun)
- [Marin College, ca mathematics Department](#) – Converting repeating decimals to fractions
- [Math.com](#)
- [Decimal matching](#) – Harcourt school publishers site



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Fishing for credits

This presentation was developed as part of a course requirement for the Masters of Instructional Technology program @ Virginia Tech.
Thanks for visiting.



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