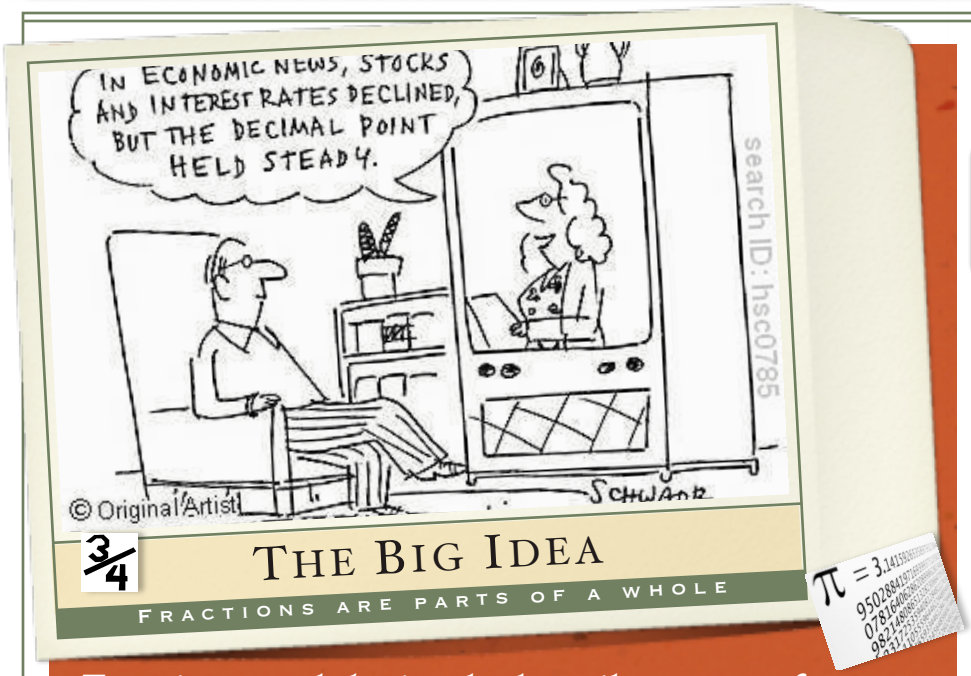
STUDY GUIDE

FRACTIONS AND DECIMALS

CHAPTER 2



Fractions and decimals describe parts of a whole. We use these to describe money, pizza, distance and all sorts of things in life!

GOALS: MAIN IDEAS OF THE CHAPTER

#1: I will be able to find and place fractions and decimals on a number line.

#2: I will be able to write a fraction after reading a word problem.

#3: I will be able to identify equivalent fractions.

#4: I will be able to find a common denominator for two fractions and use this to decide which is bigger.

#5: I will be able to find the fraction family when I am given a fraction.

#6: I will be able to write a decimal as a mixed number in lowest terms and write a fraction as a decimal.

#7: I will be able to divide and multiply by multiples of 10 just by moving the decimal point.

#8: I will be able to find a number between two decimals or two fractions.

#9: I will be able to order decimals or fractions when given a list.

#10: I will be able to convert between m, cm & mm.

Key Terms

Decimal-Fraction

A fraction that has a denominator of base 10; for example, 4/10 is a decimal-fraction.

Equivalent Fractions

Fractions that describe the same portion of a whole, or name the same number; for example, ¾, 9/12, and 30/40 are equivalent fractions

Improper Fraction

A fraction in which the numerator is greater than the denominator.

Lowest Terms

A fraction is in lowest terms if its numerator and denominator are relatively prime. For example, 5/6 is in lowest terms because the only common factor of 5 and 6 is 1.

Relatively Prime

Two numbers whose only common factor is 1.

Repeating Decimal

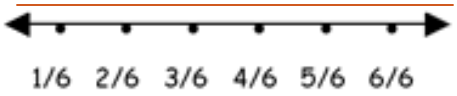
A decimal with a pattern of digits that repeat without stopping; for example, 0.23232323… is a repeating fraction.

Terminating Decimal

A decimal that does not repeat forever.

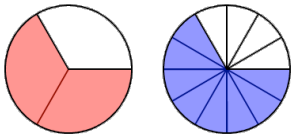
Things to know & examples of them!

Goal #1



Have an idea of what a fraction looks like on a a number line. Where would 1/3 go? What about 1/2 and 3/4?

Goal #'s 3 & 4



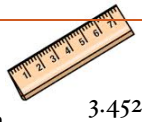
$\frac{2}{3} \times \frac{4}{4} = \frac{8}{12}$

Which fraction is bigger, $\frac{4}{6}$ *or* $\frac{3}{5}$? First find a common denominator by multiplying each fraction by the other's denominator:

$\frac{4}{6} x \frac{5}{5} = \frac{20}{30}$ *and* $\frac{3}{5} x \frac{6}{6} = \frac{18}{30}$

So, $\frac{4}{6}$ is bigger because it is equivalent to $\frac{20}{30}$ which is bigger than $\frac{18}{30}$

Goal # 10



1 m = 100 cm
1 cm = 10 mm
1 m = 1000 mm
1 cm = .01 m
1 mm = .1 cm
1 mm = .001 m

3.452 cm = 3452 mm

453 mm = .453 m

453 cm = 4.53 m

Goal #'s 3 & 5

Equivalent Fractions
Examples

$\frac{1}{2}$	*is equivalent to*	$\frac{2}{4}$,	$\frac{3}{6}$,	$\frac{4}{8}$,	$\frac{5}{10}$,	$\frac{6}{12}$,	$\frac{7}{14}$...
$\frac{1}{3}$	*is equivalent to*	$\frac{2}{6}$,	$\frac{3}{9}$,	$\frac{4}{12}$,	$\frac{5}{15}$,	$\frac{6}{18}$,	$\frac{7}{21}$...
$\frac{1}{4}$	*is equivalent to*	$\frac{2}{8}$,	$\frac{3}{12}$,	$\frac{4}{16}$,	$\frac{5}{20}$,	$\frac{6}{24}$,	$\frac{7}{28}$...
$\frac{1}{5}$	*is equivalent to*	$\frac{2}{10}$,	$\frac{3}{15}$,	$\frac{4}{20}$,	$\frac{5}{25}$,	$\frac{6}{30}$,	$\frac{7}{35}$...

A fraction family is the list of fractions whose numerators and denominators are multiples of the original fraction.

Try it! What are the next 5 in:

$\frac{5}{9}$

Goal # 6

$2.67 = 2\frac{67}{100}$ $4.006 = 4\frac{6}{1000}$

Say the decimal, and then write the fraction you just said!

Goal # 7

$2.345 \; x \; 100 = 234.5$

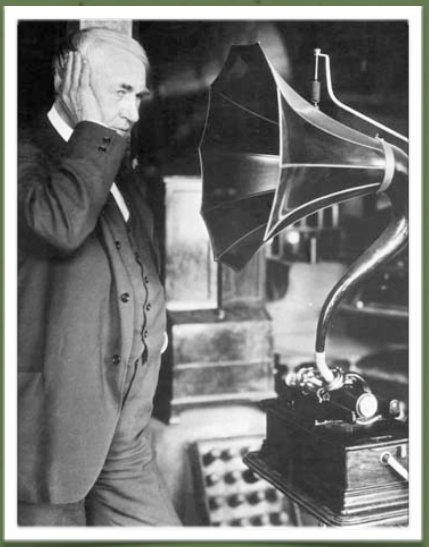
Multiplication: Count how many zeros you are multiplying by and move the decimal to the right that many times.

$56.7 \div 1000 = .0567$

Division: Count how many zeros you are dividing by and move the decimal to the left that many times.

"Genius is one per cent. inspiration and ninety-nine per cent. perspiration. Accordingly, a 'genius' is often merely a talented person who has done all of his or her homework."

Thomas Edison
Inventor



Chapter 2: Fractions and Decimals

Suggestions

Here are some things you should do now, and always!

Things to know:

Vocabulary
Make sure you are studying your vocabulary! You get quizzed on it often, but it is also very useful to know when you are reading and writing word problems.

Math Facts
Make sure you are studying your math facts. These are very important each and every day in and out of math. Ask for some suggestions if you are having trouble! Go to my website and find fun links to go and practice!

Things to do:

Always do these things...
Pay attention in class.
Fill out your class notes everyday.
Raise your hand and ask questions.
Come after school for help.
Do your homework every night.
Use the resources on the books website.

Look over these things...
Class notes.
On your own problems in book.
Book website.
This study guide!
Any quizzes taken this chapter.
Look through your book and make a note of what you are not understanding.

Problems to practice

Problems in your book to practice:
Pg 68 #'s: 1,3,4,8,11,13,28,31-33.

Pg 84 #'s: 3-5,6,10,12-14,23.

Pg 100 #'s: 1,2,6,17,25.