

Fractions and Decimals

Also: Cardinal and Ordinal Numbers

This is a fraction: $\frac{1}{2}$

This is a decimal: 3.14159

Let's talk about how to read them in English.

First, fractions. A **fraction** represents one number divided by another. The top number is the **numerator** and the bottom number is the **denominator**.

$$\frac{11}{35}$$

← numerator
← denominator

The numerator is read in the normal way as a **cardinal number**. The denominator is read as a plural of an **ordinal number**. An ordinal number is a number used to give the order of things. They are most often used to say the date. For example, Valentine's Day is on February 14th (fourteenth). They can also be used to say the order things happen: *First I went to the store, second I bought some milk. or He came in third in the race.* To read a fraction, you just say the numerator and then the denominator. For example 1/8 would be *one eighth*.

If the numerator is 1, then the denominator is singular. If the numerator is more than one, then the denominator is plural.

For example: 1/16 is read as *one sixteenth*

3/16 is read as *three sixteenths*

Below is a table showing ordinal numbers from very small to very large. Note that when we write the ordinal number, we can use the number plus the last two letters of the word. For example: 1st (first), 2nd (second), 3rd (third), 4th (fourth).

Cardinal number	Reading	Ordinal number	Reading
1	one	1 st	first
2	two	2 nd	second (<i>half</i> for a fraction)
3	three	3 rd	third
4	four	4 th	fourth (or <i>quarter</i> for a fraction)
5	five	5 th	fifth
6	six	6 th	sixth
7	seven	7 th	seventh
8	eight	8 th	eighth
9	nine	9 th	ninth
10	ten	10 th	tenth
11	eleven	11 th	eleventh
12	twelve	12 th	twelfth
13	thirteen	13 th	thirteenth
14	fourteen	14 th	fourteenth
15	fifteen	15 th	fifteenth
16	sixteen	16 th	sixteenth
17	seventeen	17 th	seventeenth
18	eighteen	18 th	eighteenth
19	nineteen	19 th	nineteenth
20	twenty	20 th	twentieth
21	twenty-one	21 st	twenty-first
22	twenty-two	22 nd	twenty-second
23	twenty-three	23 rd	twenty-third
24	twenty-four	24 th	twenty-fourth
25	twenty-five	25 th	twenty-fifth

30	thirty	30 th	thirtieth
40	forty	40 th	fortieth
50	fifty	50 th	fiftieth
60	sixty	60 th	sixtieth
70	seventy	70 th	seventieth
80	eighty	80 th	eightieth
90	ninety	90 th	ninetieth
100	one hundred	100 th	one-hundredth
150	one hundred fifty	150 th	one-hundred-fiftieth
200	two hundred	200 th	two-hundredth
300	three hundred	300 th	three-hundredth
500	five hundred	500 th	five-hundredth
1,000	one thousand	1,000 th	one-thousandth
5,000	five thousand	5,000 th	five-thousandth
10,000	ten thousand	10,000 th	ten-thousandth
100,000	one hundred thousand	100,000 th	one-hundred-thousandth
500,000	five hundred thousand	500,000 th	five-hundred-thousandth
1,000,000	one million	1,000,000 th	one-millionth
1,000,000,000	one billion	1,000,000,000 th	one-billionth
1,000,000,000,000	one trillion	1,000,000,000,000 th	one-trillionth

As you can see, there are patterns to the numbers. In larger numbers, it's the *last digit* that makes the ending. So if you see a crazy-looking fraction with a weird denominator, it's still pretty easy to read:

$\frac{37}{4591}$ is read as *thirty-seven four-thousand-five-hundred-ninety-firsts*

Below are some examples of common fractions. Notice that $\frac{1}{2}$ is always irregular and there are two ways of saying $\frac{1}{4}$.

Fraction	Reading	Fraction	Reading
$\frac{1}{4}$	one fourth, one quarter	$\frac{1}{16}$	one sixteenth
$\frac{1}{3}$	one third	$\frac{3}{5}$	three fifths
$\frac{1}{2}$	one half (not <i>one second</i>)	$\frac{3}{8}$	three eighths
$\frac{2}{3}$	two thirds	$\frac{7}{16}$	seven sixteenths
$\frac{3}{4}$	three quarters	$\frac{1}{5}$	one fifth

Decimals

Good news: decimals are really easy! Just be careful to say the word *point* and not *dot* or *period*. The numbers to the left of the decimal point are spoken normally. The numbers to the right of the decimal point are read individually (one at a time).

22.6749583 is read as *twenty-two point six seven four nine five eight three*

↑ decimal point

π (pi) is 3.14159, read as *three point one four one five nine*

Sometimes *zero* is read as *oh* because it's easier to say. So 6.02 is read as *six point oh two*.