

05-11-25 Fraction-Decimal Conversions

C&L Math Tutoring

May 2025

Review of decimal place values

3.141592653589

3: ones

(all place values after the decimal point “.” represent a number < 1)

1: tenths

4: hundredths

1: thousandths

5: ten thousandths

9: hundred thousandths

2: millionths

6: ten millionths

5: hundred millionths

3: billionths

5: ten billionths

8: hundred billionths

9: trillionths

Example: How would you write this decimal using place value names? 0.578

Solution: Five hundred seventy-eight thousandths

Decimals to fractions

Example: Convert 0.578 to word form, then into a fraction.

$$0.578 = \text{five hundred seventy-eight thousandths} = \frac{578}{1000}$$

Simplify:

$$\frac{578 \div 2}{1000 \div 2} = \frac{289}{500}$$

Solution:

$$0.578 = \text{five hundred seventy-eight thousandths} = \frac{289}{500}$$

Fractions to decimals

Example: Convert $\frac{3}{25}$ to a decimal.

You could just divide 3 by 25, but there is a much easier way without having to do long division, which is to put the numerator over 100.

$$\frac{3 \times 4}{25 \times 4} = \frac{12}{100}$$

This number is pronounced as “twelve hundredths”. Using that, we can convert to the decimal

$$\boxed{0.12}$$