

Fraction / Decimal / Percent Conversions

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① Fraction → Decimal

- Numerator \div denominator

Ex. $\frac{17}{18}$

$17 \div 18 = 0.9\bar{4}$

Ex.

$5\frac{2}{3}$ $5.\bar{6}$

$2 \div 3 = 0.\bar{6}$

② Fraction → Percent

- Build a proportion, $\frac{N}{D} = \frac{?}{100}$ cross-multiply + divide

Ex. $\frac{21}{24}$

$\frac{21}{24} = \frac{?}{100}$

$21 \times 100 \div 24 = 87.5\%$

Ex. $2\frac{5}{12} = \frac{29}{12}$

$\frac{29}{12} = \frac{?}{100}$

$241.\bar{6}\%$

③ Decimal to Percent

- Multiply by 100
- OR • move the decimal 2 places **RIGHT** \rightarrow

Ex. 0.255×100

25.5%

Ex. 2.40×100

240%

Ex. 0.0037×100

0.37%

④ Decimal to Fraction

- keep whole number the same
- use smallest place value name for denominator
- "decimal" digits are numerator
- * REDUCE *

1000TH

* REDUCE *

Ex. 1.58 ^{100TH}

$$\frac{58 \div 2}{100 \div 2} = \frac{29}{50}$$

Ex. 0.125 ^{1000TH}

$$\frac{125 \div 25}{1000 \div 25} = \frac{5 \div 5}{40 \div 5} = \frac{1}{8}$$

⑤ Percent to Decimal

• Divide by 100

OR • Move the decimal 2 places ← LEFT

Ex. 128% $\div 100$

1.28

90.45% $\div 100$

0.9045

0.241% $\div 100$

0.00241

⑥ Percent to Fraction

• Percent means per 100

• Write as a fraction, denominator = 100, then reduce

⊛ "Scale up" if it's a fractional percent

Ex. 45% $\frac{45 \div 5}{100 \div 5} = \frac{9}{20}$

Ex. 385% $\frac{385}{100} = 3 \frac{85 \div 5}{100 \div 5} = 3 \frac{17}{20}$

Ex. 15.2% $\frac{15.2 \times 10}{100 \times 10} = \frac{152 \div 2}{1000 \div 2} = \frac{76 \div 2}{500 \div 2} = \frac{38 \div 2}{250 \div 2} = \frac{19}{125}$