1) FRACTION TO DECIMAL
Just divide the top of the fraction by the bottom.

Solved examples:

$\frac{3}{4} = 0.75$

$\frac{7}{11} = 0.636363\ldots$

2) DECIMAL TO FRACTION
Express as a fraction with denominator 10, 100 or 1000 etc. so that the number of zeros in the denominator matches the number of digits to the **right** of the decimal point in the decimal number. Next, reduce the fraction to lowest terms.

Solved examples:

$0.18 = \frac{18}{100} = \frac{9}{50}$

$0.0124 = \frac{124}{10000} = \frac{31}{2500}$

$2.464 = \frac{2464}{1000} = \frac{308}{125}$

TRY – *Convert each fraction to a decimal and round to two decimal places.*

$4/9 = 0.44\overline{4} \cong 0.44$

$3/7 = 0.4286 \cong 0.43$

TRY – *Convert each decimal to a fraction.*

$0.125 = \frac{125}{1000}$ GCF:125 $\frac{125 \div 125}{1000 \div 125} = \frac{1}{8}$

$3.50 = \frac{350}{100}$ OR $\frac{35}{10}$ GCF:5 $\frac{35 \div 5}{10 \div 5} = \frac{7}{2}$

3) FRACTION TO PERCENT
Convert to decimal, then multiply by 100.
Add % symbol right to your answer.

Solved examples:
½ = 0.5 → 0.5 x 100 = 50%

¾ = 0.75 → 0.75 x 100 = 75%

4) PERCENT TO FRACTION
Write the percent over 100 and get rid of the % symbol.
Reduce the fraction.

Solved examples:
25% = 25/100
     = ¼

125% = 125/100
      = 5/4

TRY – Convert each fraction to a percentage.
$1/8 = 0.125 \rightarrow 0.125 \times 100 = 12.5\%$

$9/4 = 2.25 \rightarrow 2.25 \times 100 = 225\%$

TRY – Convert each percentage to a fraction.
$100\% = \frac{100}{100} = 1$

$30\% = \frac{30}{100} = \frac{3}{10}$

5) DECIMAL TO PERCENT
Multiply by 100 and add % symbol right to your answer.

Solved examples:
$0.08 = 0.08 \times 100\% = 8\%$

$0.345 = 0.345 \times 100\% = 34.5\%$

$6.7 = 6.7 \times 100\% = 670\%$

6) PERCENT TO DECIMAL
Divide by 100 and get rid of % symbol.

Solved examples:
$68\% = 68 \div 100 = 0.68$

$128\% = 128 \div 100 = 1.28$

TRY – Convert each decimal to a percentage.
$1.00 = 1.00 \times 100\% = 100\%$

$0.125 = 0.125 \times 100\% = 12.5\%$

TRY – Convert each percentage to a decimal.
$200\% = 200 \div 100 = 2$

$0.05\% = 0.05 \div 100 = 0.0005$

Fill in the missing information in the chart.

Reduced Fraction	Decimal	Percent
$\dfrac{9}{100}$	$9 \div 100 = 0.09$	9%
GCF:25 $\dfrac{125}{100} = \dfrac{5}{4}$ OR $1\dfrac{1}{4}$	$125 \div 100 = 1.25$	125%
GCF:4 $\dfrac{28}{100} = \dfrac{7}{25}$	0.28	$0.28 \times 100\% = 28\%$
GCF:25 $\dfrac{25}{1000} = \dfrac{1}{40}$	0.025	$0.025 \times 100\% = 2.5\%$
$\dfrac{5}{8}$	$5 \div 8 = 0.625$	$0.625 \times 100\% = 62.5\%$
$\dfrac{1}{3}$	$1 \div 3 = 0.33$	$0.33 \times 100\% = 33\%$
GCF:5 $\dfrac{55}{1000} = \dfrac{11}{200}$	$5.5 \div 100 = 0.055$	$5\dfrac{1}{2}\%$ OR 5.5%
GCF:125 $\dfrac{125}{1000} = \dfrac{1}{8}$	$1.25 \div 100 = 0.0125$	1.25%
$\dfrac{2}{1000} = \dfrac{1}{500}$	0.002	$0.002 \times 100\% = 0.2\%$
GCF:25 $\dfrac{1075}{1000} = \dfrac{43}{40}$	1.075	$1.075 \times 100\% = 107.5\%$
$\dfrac{12}{13}$	$12 \div 13 = 0.92$	92%
$5\dfrac{1}{3} = \dfrac{16}{3}$	$16 \div 3 = 5.33$	533%

THINKING
The book value of 1000 stocks is $18,000. The market value of the investment reaches $22,500 in a year.
a) What percentage of the original investment is the profit?

Original Investment $18,000.

Current value of original investment $22,500.
The difference is either loss (if -ve), profit (if +ve)
Step 1 22,500 − 18,000 = $4,500. Step 2 4500 out of 18000
                                          $4500/18000 = 0.25 = 25\%$.

b) How many stocks does the investor need to sell that would be equivalent to the profit amount?

Purchase Price $= 18000 \div 1000 = \$18/1$ share
Current Price $= 22,500 \div 1000 = \$22.5/1$ share
number of stocks $= \dfrac{4500}{22.5} = 200$ stocks.   ∴ The Investor needs to sell 200 stocks.

> **Book Value:**
> Total cost of a certain number of stocks when purchased.
>
> **Market Value:**
> Total cost of a certain number of stocks when sold.