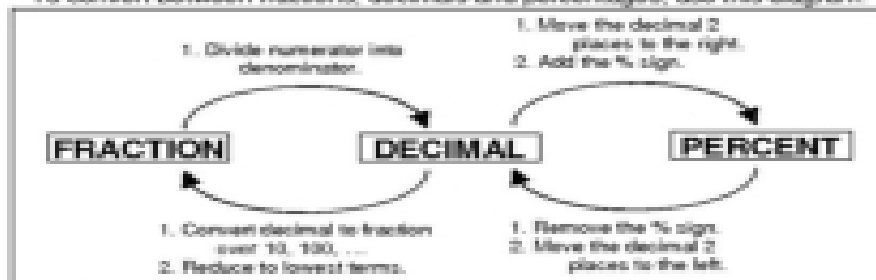




Working with Percentages

The symbol % means a fraction over 100: 0.01 or $\frac{1}{100}$.
The word of in percentage problems means "times".

To convert between fractions, decimals and percentages, use this diagram:



There are three types of percent problems:

- 1) Determine the percentage of a given number.

Example: What is 17% of 82?
Solution: $x = 17\% \times 82$
 $= 0.17 \times 82$
 $= 13.94$

- 2) Determine what percentage one number is of another number.

Example: What percent of 48 is 18?
Solution: $x\% \times 48 = 18$
 $x(0.01)(48) = 18$
 $0.48x = 18$
 $x = \frac{18}{0.48} = 37.5$
 $= 37.5\%$

- 3) Determine a number when a percentage of it is given.

Example: 3 is 18% of what?
 $3 = 18\% \times x$
 $3 = (0.18)x$
 $3 \div 0.18 = x$

$x = 18.75$

FRACTION	DECIMAL	PERCENT
$\frac{1}{10}$	0.1	10%
$\frac{1}{8}$	0.125	12½%
$\frac{1}{6}$	0.1666...	16⅔%
$\frac{1}{5}$	0.2	20%
$\frac{1}{4}$	0.25	25%
$\frac{1}{3}$	0.3333...	33⅓%
$\frac{1}{2}$	0.375	37½%
$\frac{1}{2}$	0.4	40%
$\frac{1}{2}$	0.5	50%
$\frac{1}{2}$	0.6	60%
$\frac{1}{2}$	0.625	62½%
$\frac{1}{2}$	0.6666...	66⅔%
$\frac{1}{2}$	0.75	75%
$\frac{1}{2}$	0.8	80%
$\frac{1}{2}$	0.8333...	83⅓%
$\frac{1}{2}$	0.875	87½%
1	1	100%