

# Mathematics 1

## a. Place Value

Thousands	Hundreds	Tens	Units	.	Tenths	Hundredths	Thousandths
1000	100	10	1	.	1/10	1/100	1/1000
$10^3$	$10^2$	$10^1$	$10^0$	.	$10^{-1}$	$10^{-2}$	$10^{-3}$

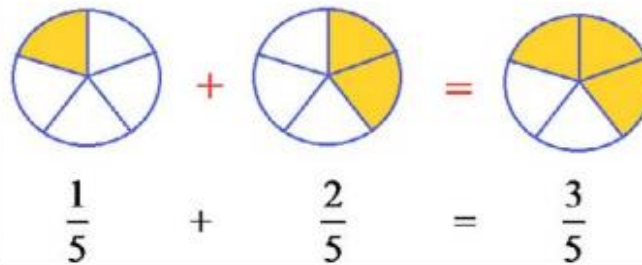
## b. Equivalent fractions

$\frac{1}{2}$					
$\frac{1}{4}$			$\frac{1}{4}$		
$\frac{1}{6}$		$\frac{1}{6}$		$\frac{1}{6}$	
$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$
$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$
$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$

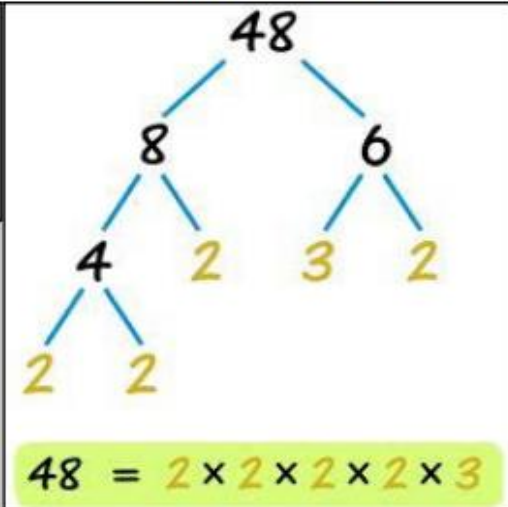
$$\frac{1}{2} = \frac{2}{4} = \frac{3}{6} = \frac{4}{8} = \frac{5}{10} = \frac{6}{12}$$

## c. Adding fractions

Ensure the denominators of the fractions are the same. If necessary, find the equivalent fractions so they are the same number. Then add/subtract the numerators. The denominator stays the same. Then simplify the fraction.



## d. Prime factors

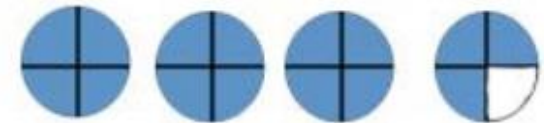


## e. Key Words and definitions

<b>Numerator</b>	the number above the line in a fraction, the number being divided (the dividend)
<b>Denominator</b>	the number below the line in a fraction, the divisor
<b>Equivalent</b>	equal in value
<b>Expression</b>	An algebraic expression is a mathematical phrase that can contain ordinary numbers, variables (like x or y) and operations
<b>Evaluate</b>	To find or work out a numerical expression for
<b>Generalise</b>	To find a pattern or relationship that is always true
<b>Simplify</b>	To reduce to a simpler form
<b>Term</b>	In algebra a term is either a single number or variable, or numbers and variables multiplied together

## f. Improper fractions

Changing mixed numbers to improper fractions



Mixed number is  $3\frac{3}{4}$

Improper fraction is  $\frac{15}{4}$