Chapter 20 수, 수식, 기호 및 도형을 읽는 法

1. Cardinal Numbers (基數)

0	zero	30	thirty
1	one	40	forty
2	two	50	fifty
3	three	60	sixty
4	four	70	seventy
5	five	80	eighty
6	six	90	ninety
7	seven	100	one hundred
8	eight	101	one hundred (and)one
9	nine	200	two hundred
10	ten	1000	one thousand
11	eleven	100,000	one hundred thousand
12	twelve	1,000,000	one million
13	thirteen	1,000,000,000	one billion (영국 one thousand million)
14	fourteen		
15	fifteen	1,000,000,000,000	one trillion(영국 one billion)
16	sixteen	10^{15}	one quadrillion (영국 10^{24})
17	seventeen	10^{18}	one quintillion (영국 10^{30})
18	eighteen	10^{21}	one sextillion (영국 10^{36})
19	nineteen	10^{24}	one septillion (영국 10^{42})
20	twenty	10^{27}	one octillion (영국 10^{48})
21	twenty-one	10^{30}	one nonillion (영국 10^{54})
		10^{33}	one decillion (영국 10^{60})

[참] 많은 수자는 다음과 같이 읽기도 한다.

10^{10} : one followed by ten zeros(ten to the tenth)

30,000,000,000 : three followed by ten zeros

* 10억 이상의 수가 되면, 영.....미의 읽는 방법이 다르다. 다시 말하면 million 까지는 같으나 billion 이 되면 영국식에서는 1,000,000 × 1,000,000(1조)를 의미하며 미식에서는 1,000,000,000 (10억)를 의미한다.
이 이상의 수자에 대하여서도 미식은 천배단위로, 영식은 백만배 단위로서 명칭이 달라진다.

7,564,329 seven million, five hundred and sixty-four thousand, three hundred and twenty-nine

5,376,982,134,653 five trillion, three hundred seventy-six billion, nine hundred eighty-two million, one hundred thirty-four thousand, six hundred fifty three

* hundred 다음에 and를 넣어서 읽는 것이 원칙이나 미식에서는 이를 생략하는 경향이 있다.

2. Ordinal Numbers (序數)

1	first	11	eleventh
2	second	12	twelfth
3	third	13	thirteenth
4	fourth	20	twentieth
5	fifth	21	twenty-first
6	sixth	30	thirtieth
7	seventh	100	hundredth

8	eighth	101	hundred first
9	ninth	1000	thousandth
10	tenth		

3. Decimals(小數)

.1	decimal(point) one, one tenth
.01	decimal(point) naught one, one hundredth
.001	one thousandth
.000001	one millionth
9.623	nine point six two three
0.347	zero point(decimal) three four seven
28,432.028	twenty-eight thousand, four hundred thirty two point (decimal) zero two eight
$0.555... = 0.\dot{5}$	zero point five recurring
$0.\dot{3}\dot{7}$	zero point thirty-seven recurring
$0.24\dot{7}\dot{3}$	zero point two four seventy-three recurring

4. 數學記號

+	plus
-	minus
±	plus or minus
∓	minus or plus
×	multiplied by
÷	divided by
=	equals, is equal to
≒, ≃	approximately equals
≠	does not equal, is not equal to
>	is greater than
≫	is much greater than

≥ is greater than or equal to
⊁ is not greater than
a≠b a is not identical with b
< is less than
≪ is much less than
≤ is less than or equal to
≮ is not less than
⊥ is perpendicular to
// is parallel to
∦ is antiparallel to
∠ angle
∴ therefore
∵ because
e.g. for example
i.e. that is
—— vinculum
$\overline{a+b}$, vinculum a plus b

a≡b identity(恒等式), a is identical with b.
Δ increment of
∼ the difference between a∼b, the difference between a and b
a ∝ b a varies as b.
a : b the ratio of a to b
:: equals

( ) brackets or parenthesis
(a+b), bracket a plus b bracket closed
[ ] angular brackets
{ } braces, is used to represent a set
% percent * to remove parentheses : 괄호를 푼다.
to bracket : 괄호로 묶는다.

----′ prime or dash
----″ second or two dash
----‴ third or three dash
....° degree

□″	square inch
□′	square foot
lbs./□″	pounds per square inch
lbs./□′	pounds per square foot
....′	foot(feet)
	minute
....″	inch(-es)
$\int$	integral
$\int_b^a$	integral between limits a and b
A_n	A...n or A sub. n
A_n'	a dash sub. n
$\overrightarrow{A}$	vector A
$\bar{A}$	a bar
A_n	A...n or A sub. n
A_n'	a dash sub. n
$\overrightarrow{\overrightarrow{A}}$	vector A
$\bar{A}$	a bar
$\hat{a}$	a hat, a wedge
a^*	a star
$\|a\|$	asolute value of a
$\frac{d^2y}{dx^2}$	d squared dy divided by dx square

* 소수점 이하의 수자는 하나씩 읽는다.
* 0은 미식에서 zero라고 읽으나 영식에서는 naught 라고 하는 경우가 있다.
* 소수점이하 2자리까지.....
  ..... to two places of decimals
* 소수 제3자리 까지 계산한다.....
  ..... to calculate down to three place of decimals
* 순환소수(循環小數).....
  ..... recurring decimals, circulating decimals, repeating decimals

5. Fractions(分數)

$\frac{1}{2}$ one half, a half

$\frac{1}{3}$ one third, a third

$\frac{1}{4}$ one fourth, a quarter

$\frac{1}{5}$ one fifth, a fifth

$\frac{1}{10}$ one tenth, a tenth

$\frac{1}{20}$ one twentieth, a twentieth

$\frac{1}{21}$ one twenty first, a twenty-first

$\frac{3}{21}$ three twenty firsts

$\frac{4}{23}$ four twenty thirds

$\frac{7}{100}$ seven hundredths

$\frac{3}{4}$ three fourths, three quarters

$\frac{123}{564}$ one hundred and twenty-three over five hundred and sixty-four

$3\frac{1}{3}$ three and one third

$6\frac{7}{8}$ six and seven eights

* 분수에서 분자를 먼저 기수로, 분모는 뒤에 서수로 읽는다. 분자가 복수인 경우, 분모의 서수에 s 를 붙인다.
간단히 읽는 법으로서는 상기의 예인 $\frac{123}{564}$ 에서 읽는 바와 같이 우선 분자의 수자를 기수로 읽은 후 over(by)다음에 분모의 수자를 기수로 읽는다. 다음의 예를 더 참조하라.

$\frac{2}{3}$ two over three, two by three

6. proportion(比例)

3:6 = 4:8 three is to six as four is to eight

* A ratio is written $\frac{a}{b}$ or a:b

The statement of equality between two ratios is a proportion $\frac{a}{b} = \frac{c}{d}$ or a:b = c:d,

extreme : 외항(外項)
mean : 내항(內項)

direct proportion : 정비례
be in direct proportion to : 정비례하다.
inverse proportion : 반비례
be in inverse proportion to : 반비례하다.
reciprocal : 역수

체적은 압력의 증가에 역비례한다.
The volume varies inversely with the increase of pressure.

7. Powers and Roots[멱(冪)과 근(根)]

$3^2 = 9$	three squared equals nine, three square equals nine
$3^3 = 27$	three cubed equals twenty seven three cube equals twenty seven
a^2	a squared, a square
a^3	a cubed, a cube, a tripled
a^4	a to the fourth (power) or the fourth power of a
a^n	a to the nth (power) or the nth power of a
a^{-n}	a to the minus nth (power) or the minus nth power of a
$a^{\frac{1}{2}}$	a to one-half (power)
$a^{-\frac{1}{2}}$	a to the minus one-half (power)

$K=ar^{n-1}$ K equals a times r to the n minus one power

* exponent : 지수(指數)
  a^3 has base a, exponent 3.
  raise a to the nth (power) : a를 n승(乘)하다

수, 수식, 기호 및 도형 을 읽는 法

$\sqrt{a}$	the square root of a
$\sqrt[3]{a}$	the cube root of a
$\sqrt[n]{a}$	the nth root of a
$\sqrt{a+b}$	the square root of the quantity of a plus b
$5+4\sqrt{-1}$	five plus, four times the square root of minus one
$\frac{1}{2}\sqrt{2a^2+2b^2-c}$	one-half the square root of the quantity two a squared plus two b squared minus c
$\sqrt{25}$	the square root of twenty-five
$\sqrt[3]{27}$	the cubic root of twenty-seven
$\sqrt[3]{8} = 2$	the cubic root of eight equas two

* the evolution[개방(開方)]

8 : the radical quantity
3 : the index of the root
: the radical sign
2 : the value of root

a radical expression : 무리식(無理式)
extract the nth root of a : a 의 n승근을 구하다.
Find to the decimal places the square root of 365. : 365 의 평방근을 소수 2자리 까지 구하라.

8. addition(加法), substraction(減法), multiplication(乘法) 및 division(除法)

$1 + 3 = 4$ One plus three equals four.
One plus three is equal to four.
One plus three is four.
One and three are four.
The sum of one and three is four.
How much are one and three ?

$5 - 3 = 2$ Five minus three equals two.
Five minus three is equal to two.
Five minus three is two.
Five minus three makes two.
Three from five leaves two.
Take three from five and the remainder is two.
How much is five minus three ?

$7 \times 2 = 14$ Seven multiplied by two equals fourteen.
Twice seven is(are) fourteen.
The product of seven and two is fourteen.
Seven times two equals fourteen.
How much is seven times two ?
What is seven times two ?
Multiply seven by two.

$15 \div 3 = 5$ Fifteen divided by three equals five.
Three into fifteen goes five times.
Divide fifteen by three.

$\frac{4}{5} + \frac{2}{7} = \frac{38}{35}$ Four over five plus two over seven equals thirty-eight over thirty-five.

$(6+5\frac{3}{4} - 4.66\times3)\div3\frac{1}{7}$ Six plus five and three-fourths minus, four point six six multiplied by three, all divided by three and one seventh.

$(a+b)c$ the quantity a plus b times c.

$a^2-b^2=(a+b)(a-b)$ a squared minus b squared equals the quantity a plus b times the quantity a minus b or a squared minus b squared equals parenthesis a plus b times parenthesis a minus b.

$(a-b)^2=a^2-2ab+b^2$ The quantity a minus b squared equals a squared minus two a b plus b squared

$$(a+b)^n=a^n+na^{n-1}b+\frac{n(n-1)^{n-2}}{2}a^{n-2}b^2 \cdots\cdots+b_n$$

The quantity a plus b to the nth power equals a to the nth power plus n times the quantity a to the n minus one power times b plus n times n minus one to the n minus two power divided by two times the quantity a to the n minus two power times b squared down to b to the nth power.

* a^n를 a to the nth (power)라고 읽는 것이 정식이나 경우에 따라 생략되어 a to the n 이라고도 읽는다.

$k = 81(\frac{2}{3})^8$ k equals eighty-one times two-thirds to the eighth power.

$\frac{a}{b(c+d)}$ a divided by the whole quantity b times quantity c plus d

수, 수식, 기호 및 도형 을 읽는 法

$(\frac{a}{b}c+d)$ a over b, times c plus d in parenthesis

$\frac{1}{a^2(a^2-4)^3}$ one over the quantity a squared times the quantity a squared minus four, to the third power

$\frac{a^3+1}{(a^2+1)^{2/3}}$ a to the third power plus one over(divided by) the quantity a squared plus one, to the two-thirds power.

$\lim_{n\to\infty} \frac{1}{n^2}(1+2+....+n)$ the limit as n goes to infinity of the quantity one over n squared times the sum of the first n positive integers or the limit as n goes to infinity of the quantity one over n squared times one plus two plus, plus n

$\frac{1}{2}\{a[b+(c-d)]\}$ one-half open brace, a open bracket b plus open parenthesis c minus d, close parenthesis close bracket and brace.

* ( ), [ ], { }를 갖는 식에서는 여러 가지로 읽는 법이 있으나 단지 소리에 따라 써 내려가는 경우에는 특별한 주의가 필요하다.

* $(a-b)^2=a^2-2ab+b^2$ 의 내용을 말로 표현하면
The square of the difference of two terms equals the square of the first term minus twice the product of the two terms plus the square of second term .

*$(a+b)(a-b)=a^2-b^2$의 내용을 말로 표현하면
The product of the sum and the difference of two terms equals the difference of their squares.

factor	: 인수
factor, factorize	: 인수로 분해하다.
expansion	: 전개
expand	: 전개하다.
expression	: 식
formula	: 식.공식
equation	: 방정식
evaluate	: 값을 구하다.
monomial	: 단항식
binomial	: 2항식
trinomial	: 3항식
polynomial	: 다항식
a linear equation	: 1차 방정식
a quadratic equation	: 2차 방정식
simultaneous equation	: 연립 방정식
remove parenthesis and arrange in order of descending power of x	: 괄호를 풀어서 x를 강멱(降冪)의 순서로 배열하다.
transposition	: 이항(移項)
transpose	: 이항하다.
elimination	: 소거(법)
eliminate	: 소거하다.
substitution	: 대입
subtitute	: 대입하다.
subtitute A for B	: A 를 B에 대입하다
rational	: 유리(有理)의
rationalize	: 유리화하다.

solve the equation for x : X에 관하여 방정식을 푼다.

9. Logarithms(對數)

loga	log a, log of a.
$\log_2 a$	log of a to the base two.
$\log R = A + \frac{B}{T} + \frac{K}{\log R}$	LogR equals A, plus B over T, plus K over logR.
$\log N^k = K \log N$	The logarithm of the Kth power of N equals K times the logarithm of N.
$\log \sqrt[q]{N} = \frac{1}{q} \log N$	The logarithm of the qth root of N equals the logarithm of N divided by q.
$\log A^{\frac{1}{n}} = \frac{1}{n} \log A$	Log of A to the one over n power equals one over n times log of A.

* antilog(antilogarithm) : 역대수
tables of logarithms : 대수표

10. Permutations(順列)

factorial : !
five factorial : 5!

$$P(n.r) = n(n-1)(n-2)\cdots(n-r+1) = \frac{n!}{(n-r)!}$$

Permutations of n things taken r at a time equals n times n minus one times n minus two down to n minus r plus one equals n factorial over n minus r factorial.

$P = \frac{n!}{p!q!r!}$ P equals n factorial divided by p factorial times q factorial times r factorial.

* factorial : 계승(階乘)

$\sum_{r=0}^{n} \binom{n}{r}^2 = \frac{(2n!)}{(n!)^2}$ The sum from r equals zero to n equals of the quantity n things taken r at a time squared equals two n factorial divided by n factorial squared.

11. combinations(組合)

$C(n \cdot r) = \frac{P(n,r)}{r!} = \frac{n!}{r!(n-r)!}$

The combinations of n things taken r at a time equals permutations of n things taken r at a time divided by r factorial equals n factorial divided by r factorial times n minus r factorial.

$\binom{n}{r} = \frac{n!}{r!(n-r)!}$ The combinations of n things taken r at a times equals n factorial divided by the quantity r factorial times n minus r factorial.

12. differentials(微分)

$f(x)$ f of x, function of x

$\Delta\chi$ delta χ

$d\chi$ d χ (differential of χ)

$\frac{dy}{d\chi}$ derivative of y with respect to χ

$\frac{\partial y}{\partial \chi}$ partial derivative of y with respect to χ

$\frac{d^2y}{d\chi^2}$ the second derivative of y with respect to χ

$\frac{\partial^2 y}{\partial \chi^2}$ the second partial derivative of y with respect to χ

$\frac{\partial^2 z}{\partial \chi \partial y}$ the partial derivative with respect to χ of the partial derivative of z with respect to y

$\frac{d^n y}{d\chi^n}$ the nth derivative of y with respect to χ

$\frac{d^2y}{d\chi^2} = -\alpha^2 e^{-\alpha x} = -(a^2 e^{-ax})$

The second derivative of y with respect to χ is equals to minus the quantity alpha squared times e to the minus alpha times χ power.

$a_3y''' + a_2y'' + a_1y' + a_0y = 0$

a sub three times the third derivative of the function y with respect to ( ) plus a sub two times the second derivative of the function y with respect to ( )..... or

a sub three times y triple prime plus a sub two times y double primes plus a sub one times y prime plus a sub zero times y equals zero.

* 내용을 읽으면 위와 같이 복잡하나 식만을 읽을 때에는 밑의 방법이 간편하다.

13. Integrals(積分)

$\sum_{a=1}^{n} \chi_a$ The sum form a equals one to n of χ sub a.

$$\int a\chi d\chi = a\int \chi d\chi = \int \frac{a\chi^2}{2} + c$$

The indefinite integral of a times χ with respect to χ equals a times the indefinite integral of χ equals the quantity a times χ squared over two plus c.

$\int_{\chi=a}^{b} f(\chi)d\chi$ the integral form a to b of χ or the integral between the limits χ equals a and χ equals b of the function of χ with respect to χ

$\iint f(\chi,y)d\chi dy$ The double integral of f of χ, y.

$\int_c^d \int_a^b f(\chi,y)d\chi dy$ integrating from c to d with respect to y the integral from a to b of f of χ,y with respect to χ

$\int \frac{a}{\chi-\alpha} d\chi = a\log|\chi-a|$ The indefinite integral of the quantity a over χ minus α with respect to χ equals a times the quantity log of the absolute value of χ minus α.

$\int_0^{\frac{\pi}{2}} \frac{d\chi}{1+\alpha \cos\chi}$ the integral from zero to pi over two of the quantity one over one plus α times cosine of χ with respect to χ

* 읽어내려만 가는 경우에는
the integral from zero to pi over two of $d\chi$ over one plus α times cosine of χ

14. Trigonometry(三角法)

$\sin^{-1}X$	inverse sine (of) X, arc sine(of) X
$\cos^{-1}X$	inverse sosine (of) X, arc cosine (of) X
$\tan^{-1}X$	inverse tangent (of) X, arc tangent (of) X
sinh X	hyperbolic sine (of) X

$\sin A + \sin B \equiv 2 \sin \frac{1}{2}(A+B) \cdot \cos \frac{1}{2}(A-B)$

The sine of A Plus the sine of B is equivalent to two times the sine of one-half of A plus B times the cosine of one-half of A minus B.

* 위에서의 읽은 방법은 수학에 조예가 있는 사람이 써내려가는 경우에는 틀림이 없으나 그렇지 않은 경우에는 적당히 quantity, parenthesis 등의 말을 넣어서 명확하게 표현하여야 한다.

$\sin 3\theta \equiv 3 \sin \theta - 4\sin^3 \theta$

The sine of three theta is equivalent to three times the sine of theta minus four times the quantity sine theta cubed.

$$\sin \tfrac{1}{2} A \pm \sqrt{\frac{1 - \cos \cdot A}{2}}$$

The sine of one-half A is equivalent to plus or minus the square root of the quantity one minus the cosine of A all over two.

$\sin^{-1}(-1) - \cos^{-1}(-1)$

inverse sine of minus one minus inverse cosine of minus one

$$\begin{vmatrix} a_{11} & a_{12} \\ a_{21} & a_{22} \end{vmatrix} = a_{11}a_{22} - a_{12}a_{21}$$

The determinant with the diagonal a sub one one to a sub two two eguals a sub one one

times a sub two two minus a sub one two times a sub two one.

or

The determinant of the matrix a one one, a one two, a two one, a two two equals a one one times a two two minus a one two times a two one.

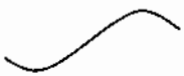
* 위의 것은 내용을 말할 때 이고, 밑의 방법은 써가면서 읽을 때이다.

15. Figures(圖形)

A ——————— B. the straight line segment AB

A ...initial point A (the end A)

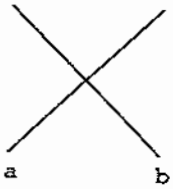
B ...terminal point B (the end B)



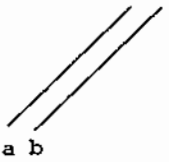
free curve

arc

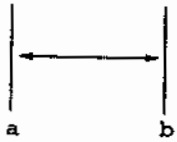
the broken line(the composition of connected straight lines)



the point of intersection of lines a and b

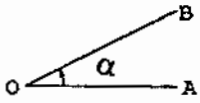


Line a is parallel to line b.



the distance between the straight lines a and b

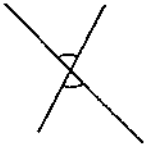
the perpendicular a on b



The line determining an acute angle α

O is the vertex of angle.

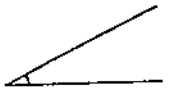
α is the angle AOB.



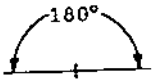
the opposite angle

the right angle

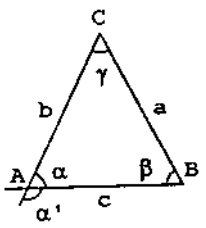
the obtuse angle



the acute angle



the straight angle



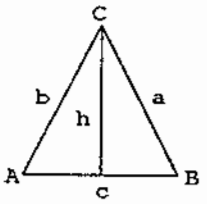
The equilateral triangle

A, B, C : the vertices(vertex의 복수 Vertices)

a, b, c : the sides

α : interior angle

α' : exterior angle

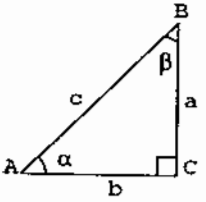


the isosceles triangle

a,b : the sides

c : the base

h : the perpendicular bisector of the line AB

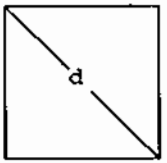


the right triangle

c : the hypotenuse

b : the side adjacent to α

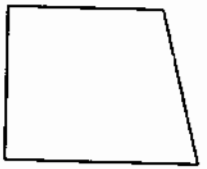
a : the side opposite to α



the square

d : the diagonal

the rectangle



the trapezoid

the parallelogram

the trapezium

(*) The names of polygons having 5, 6, 8, or 10 sides:

5 sides : pentagon

6 sides : hexagon

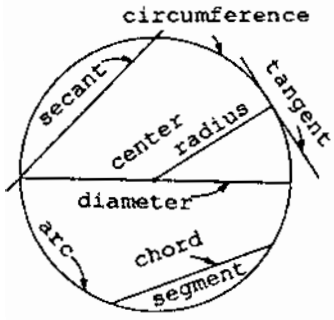
8 sides : octagon

10 sides : decagon

The circumference is the length of the curved line. Any part of the circumference is called an arc.

A line drawn through the center and terminating in the circumference is called a diameter.

Half the diameter is called a radius.



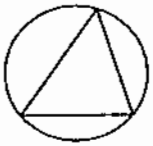
The straight line joining the ends of an arc is called a chord, and the chord is said to subtend its arc.

A straight line which touches the circle at one point only is called a tangent.

If a straight line cuts a circle at two points, its called a secant.

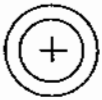
The area bounded by an arc and a chord is called a segment.

The area bounded by two radii and an arc is called a sector.

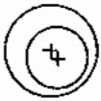


the circumscribed circle(of the triangle)

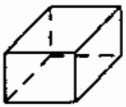
the inscribed circle(of the triangle)



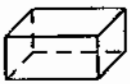
the concentric circles



the eccentric circles



the cube



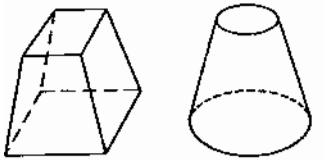
the rectangular solid

the right circular cylinder

the oblique cylinder

the right pyramid

the right circular cone



the frustum

* The names of polyhedrons. - hedron(헤드론)... 面體

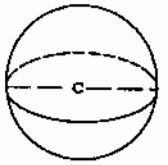
four-faced polyhedron : the tetrahedron

six-faced polyhedron : the hexahedron

eight-faced polyhedron : the octahedron

twenty-faced polyhedron : the icositetrahedron

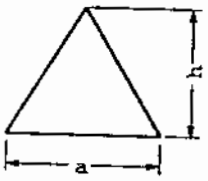
forty-eight-faced polyhedron the hexakis-octahedron



the sphere

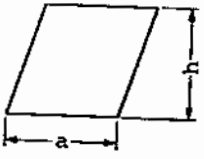
Area of rectangle (or oblong) is equal to length, multiplied by breadth, then

area = a × b.



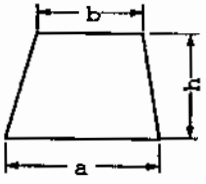
Area of triangle is equal to length of base, multiplied by a half of the perpendicular height, then

area = a × ½ h.



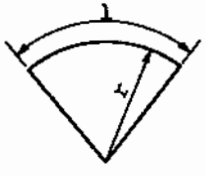
Area of rhombus or parallelogram is equal to length of base, multiplied by the perpendicular height, then

area = a × h.



Area of trapezoid is equal to half the sum of the two parallel sides, multiplied by the perpendicular distance between the two sides, then

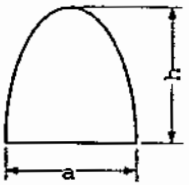
$$\text{area} = \frac{a+b}{2} \times h.$$



Area of sector of a circle is equal to length of the arc, multiplied by one half of radius of the circle, then

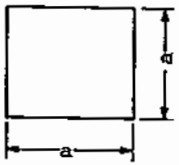
$$\text{area} = l \times \frac{r}{2}.$$

Length of arc is equal to diameter of the circle, multiplied by the number of degrees and $\pi/360$, viz. .008727.



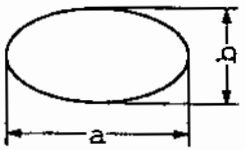
Area of parabola is equal to length of base, multiplied by two-thirds of the perpendicular height, then

$$\text{area} = a \times \frac{2}{3} h.$$



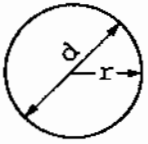
Area of square equals side squared, then area = a^2.

Length of a diagonal line equals side, multiplied by $\sqrt{2}$, then length of a diagonal line = 1.4142 a.



Area of ellipse is equal to maximum length, multiplied by maximum breadth and a quarter of π, then

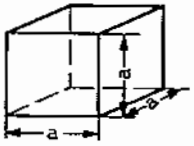
$$\text{area} = a \times b \times \frac{\pi}{4}.$$



Area of circle equals diameter squared, multiplied by one-fourth of π, or radius squared, multiplied by π, then

area = $d^2 \times .7854$

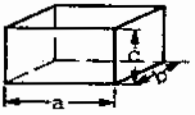
= $r^2 \times 3.1416$.



Solid content of cube equals edge cubed, then solid content = a^3.

Total area of cube equals edge squared, multiplied by 6, then

total area = $a^2 \times 6$.



Solid content of rectangular parallelepiped equals length multiplied by breadth and height, then

solid content = $a \times b \times c$.

Total area of rectangular parallelepiped is given by the following equation:

total area = $(axb+bxc+cxa) \times 2$.

Solid content of sphere equals diameter cubed, multiplied by $\pi/6$, or radius cubed, multiplied by $4\pi/3$, then

$$\text{solid content} = d^3 \times \frac{\pi}{6}$$

$$= r^3 \times \frac{4\pi}{3}.$$

Where d is the diameter of the sphere, r is the radius of the sphere.

Area of sphre equals diameter squared, multiplied by π, or radius squared, multiplied by 4π, then

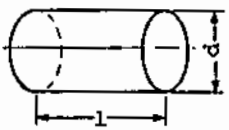
$$\text{area} = d^2 \times \pi$$

$$= r^2 \times 4\pi.$$

Where d is the diameter of the sphere, and r is the radius.

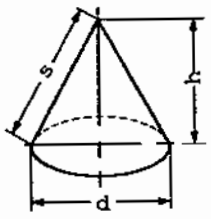
Solid content of cylinder equals area of base multiplied by length, then

$$\text{solid content} = \frac{\pi}{4} \times d^2 l.$$



Total area of cylinder equals circumference of base multiplied by length of cylinder, plus two times the area of base, then

$$\text{total area} = \pi d \times l + 2 \times \frac{\pi d^2}{4}.$$



Solid content of cone equals area of base multiplied by one-third altitude, then

$$\text{solid content} = \frac{\pi d^2}{4} \times \frac{1}{3} h.$$

Total area of cone equals circumference of base, multiplied by one-half slant height, plus area of base, then

$$\text{total area} = \pi d \times \frac{s}{2} + \frac{\pi d^2}{4}.$$

앞의 내용은 機械英語(서남섭 저)의 일부로서 사용되는 수, 수식, 기호 및 도형을 읽는 법이었고, 여기에 그 외의 수 읽는 법을 추가한다.

1. 기수 읽기
천단위마다 바뀌는 단위 이름을 알아두면 쉽게 읽을 수 있다
1,000: one thousand (천)
10,000: ten thousand (1만)
100,000: one hundred thousand (10만)
1,000,000: one million (100만)
10,000,000: ten million (1000만)
100,000,000: one hundred million (1억)
1,000,000,000: one billion (10억)
10,000,000,000: ten billion (100억)
100,000,000,000: one hundred billion (1000억)
1,000,000,000,000: one trillion (1조)

2,164,956,487,248 를 영어로 읽어보면
Two trillion, one hundred (and) sixty-four billion, nine hundred (and) fifty-six million, four hundred (and)
eighty-seven thousand, two hundred (and) forty-eight

2. 서수 읽기

1st	first	12th	twelfth
2nd	second	13th	thirteenth
3rd	third	14th	fourteenth
4th	fourth	15th	fifteenth
5th	fifth	20th	twentieth
6th	sixth	21st	twenty-first
7th	seventh	30th	thirtieth
8th	eighth	40th	fortieth
9th	ninth	50th	fiftieth
10th	tenth	100th	hundredth
11th	eleventh		

※ 수의 단위인 hundred, thousand, million, billion, trillion 등은 그 앞에 복수의 수가 붙어도 복수형으로 표시하지 않는다.

3. 연도 읽기
연도는 일반적으로 끝에서 부터 두 자리씩 끊어 읽는다.
1981년 nineteen eighty-one

1400년	fourteen hundred
1007년	one thousand and seven
313년	three thirteen
101년	one hundred and one
393 B.C.	three ninety-three B.C. B.C.:= 기원전(Before Christ)
1990s	the nineteen nineties (1990년대)
1900s	nineteen hundreds (1900년대)
'90s	nineties(90년대)
1905년	nineteen 0 five (0은 흔히 o로 읽는다.)
2000년	the year two thousand (2000이라고만 하면 이상하니까 the year를 앞에 붙인다.)
2005년	(the year) two thousand five

4. 날짜 읽기

1. 날짜(date)는 서수 또는 기수로 다음과 같이 쓰고 읽는다.
1973년 2월 7일은 다음과 같이 표기할 수 있다.

February 7, 1973	또는 7 February, 1973
February 7th, 1973	또는 7th February, 1973
Feb. 7, 1973	또는 7 Feb. 1973
02/07/1973	또는 영국 : 07/02/1973
02-07-1973	

4. 시각 읽기
시각은 시간과 분을 각각 기수로 내려 읽는 법과 past(after)나 to(before)를 사용해서 읽는 법이 있다.

8:15	eight fifteen	또는 a quarter past(영국 after) eight
9:30	nine thirty	또는 half past(after) nine
10:45	ten forty-five	또는 a quarter to(영국 before) eleven
11:00 a.m.	eleven(o'clock) [ei m]	

※ 뒤에 "~분"이 붙으면 o'clock을 사용하지 않는다.
※ 오전 a.m.(ante meridiem) [ei m], 오후 p.m.(post meri야em)[p : m]

5. 전화번호 읽기

713 6540	seven one three six five four O
347-2289	three four seven two two eight nine (미국) three four seven double two eight nine (영국)

※ 0은 O[ou], zero[zi(:)rou] 또는 nought naught[n :t]로 읽는다.

6. 통화 읽기

$7.25 seven dollars (and) twenty-five cents
또는 seven, twenty-five (7달러 25센트)
₩175 one hundred and seventy-five won (170원)

7. 이상, 초과, 미만, 이하, 까지, 부터 읽기

5이상	5 or more 5 or above 5 and over	5이하	5 and under 5 or less 5 or below
5초과	more than 5 over 5 above 5 exceeding 5 in excess of 5	5까지(5포함	up to 5
5미만	under 5 below 5 less than 5	5부터(5포함)	at or after 5(5시부터) on or after 5(5일부터)

8. 비율, 배수 읽기
비율: They passed the laws by 6 : 3. (six to three) .
배수: twice / double (두배)
: three times / three-fold / triple (세배)
: four times / four-fold / quadruple (네배)
five times / five-fold (다섯배)