



كلية العلوم

القسم : الرياضيات

السنة : الثانية

المادة : لغة تخصصية 2

المحاضرة : الاولى

{{ مكتبة A to Z }}

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كلية العلوم

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Arithmetic

Integers:

0	zero	10 ten	20 twenty
1	one	11 eleven	30 thirty
2	two	12 twelve	40 forty
3	three	13 thirteen	50 fifty
4	four	14 fourteen	60 sixty
5	five	15 fifteen	70 seventy
6	six	16 sixteen	80 eighty
7	seven	17 seventeen	90 ninety
8	eight	18 eighteen	100 one hundred
9	nine	19 nineteen	1000 one thousand

-245 minus two hundred and forty-five

22 731 twenty-two thousand seven hundred and thirty-one

1 000 000 one million

56 000 000 fifty-six million

1 000 000 000 one billion [US usage, now universal]

7 000 000 000 seven billion [US usage, now universal]

1 000 000 000 000 one trillion [US usage, now universal]

3 000 000 000 000 three trillion [US usage, now universal]

Fractions [= Rational Numbers]

Here are some examples of fractions and how to read them:

Fractions [= Rational Numbers]

$\frac{1}{2}$	one half	$\frac{3}{8}$	three eighths
$\frac{1}{3}$	one third	$\frac{26}{9}$	twenty-six ninths
$\frac{1}{4}$	one quarter [= one fourth]	$-\frac{5}{34}$	minus five thirty-fourths
$\frac{1}{5}$	one fifth	$2\frac{3}{7}$	two and three sevenths
$-\frac{1}{17}$	minus one seventeenth		

Real Numbers

- -0.067 minus nought point zero six seven
- 81.59 eighty-one point five nine
- $-2.3 \cdot 10^6$ minus two point three times ten to the six
[= $-2\,300\,000$ minus two million three hundred thousand]
- $4 \cdot 10^{-3}$ four times ten to the minus three
[= $0.004 = 4/1000$ four thousandths]
- π [= $3.14159\dots$] pi [pronounced as 'pie']
- e [= $2.71828\dots$] e [base of the natural logarithm]

Basic arithmetic operations

- Addition: $3+5 = 8$ three plus five equals [= is equal to] eight
- Subtraction: $3-5 = -2$ three minus five equals [= ...] minus two
- Multiplication: $3 \cdot 5 = 15$ three times five equals [= ...] fifteen
- Division: $3/5 = 0.6$ three divided by five equals [= ...] zero point six

Exponentiation, Roots

5^2 [= $5 \cdot 5 = 25$] five squared

5^3 [= $5 \cdot 5 \cdot 5 = 125$] five cubed

5^4 [= $5 \cdot 5 \cdot 5 \cdot 5 = 625$] five to the (power of) four

5^{-1} [= $1/5 = 0.2$] five to the minus one

5^{-2} [= $1/5^2 = 0.04$] five to the minus two

$\sqrt{3}$ [= 1.73205...] the square root of three

$\sqrt[3]{64}$ [= 4] the cube root of sixty four

$\sqrt[5]{32}$ [= 2] the fifth root of thirty two

Algebra

Algebraic Expressions

$A = a^2$ capital a equals small a squared

$a = x + y$ a equals x plus y

$b = x - y$ b equals x minus y

$c = x \cdot y \cdot z$ c equals x times y times z

$c = xyz$ c equals x y z

$(x + y)z + xy$ x plus y in brackets times z plus x y

$x^2 + y^3 + z^5$ x squared plus y cubed plus z to the (power of) five

$x^n + y^n = z^n$ x to the n plus y to the n equals z to the n

$(x - y)^{3m}$ x minus y in brackets to the (power of) three m or you can say: x minus y, all to the (power of) three m

$\sqrt{x} + \sqrt[3]{y}$ the square root of x plus the cube root of y

Inequalities

$x > y$ x is greater than y

$x \geq y$ x is greater (than) or equal to y

$x < y$ x is smaller than y

$x \leq y$ x is smaller (than) or equal to y

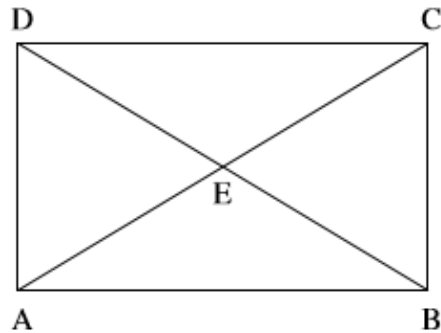
$x > 0$ x is positive

$x \geq 0$ x is positive or zero; x is non-negative

$x < 0$ x is negative

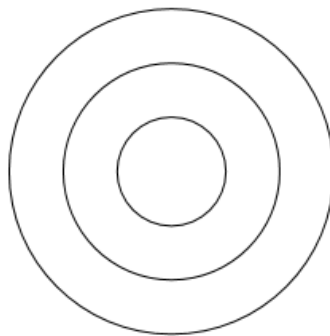
$x \leq 0$ x is negative or zero

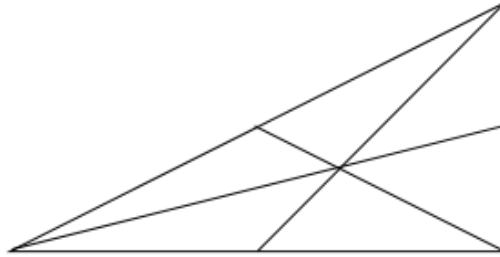
Geometry



Let E be the intersection of the diagonals of the rectangle ABCD. The lines (AB) and (CD) are parallel to each other (and similarly for (BC) and (DA)). We can see on this picture several acute angles: EAD, EAB, EBA, AED, BEC ...; right angles: ABC, BCD, CDA, DAB and obtuse angles: AEB, CED.

Here we see three concentric circles with respective radii equal to 1, 2 and 3.





If we draw a line through each vertex of a given triangle and the midpoint of the opposite side, we obtain three lines which intersect at the barycenter (= the center of gravity) of the triangle.

Mathematical arguments

$x \in A$ x is an element of A ; x lies in A ; x belongs to A ; x is in A

$x \notin A$ x is not an element of A ; x does not lie in A ; x does not belong to A ; x is not in A

$x, y \in A$ (both) x and y are elements of A ; ...lie in A ; ...belong to A ; ...are in A

$x, y \notin A$ (neither) x nor y is an element of A ; ...lies in A ; ...belongs to A ; ...is in A

\emptyset the empty set (= set with no elements)

$A = \emptyset$ A is an empty set

$A \neq \emptyset$ A is non-empty

$A \cup B$ the union of (the sets) A and B ; A union B

$A \cap B$ the intersection of (the sets) A and B ; A intersection B

$A \times B$ the product of (the sets) A and B ; A times B

$A \cap B = \emptyset$ A is disjoint from B ; the intersection of A and B is empty

\mathbb{C} the set of all complex numbers

Q the set of all rational numbers

R the set of all real numbers

Small Greek letters used in mathematics

α	alpha	β	beta	γ	gamma	δ	delta
ϵ, ε	epsilon	ζ	zeta	η	eta	θ, ϑ	theta
ι	iota	κ	kappa	λ	lambda	μ	mu
ν	nu	ξ	xi	\omicron	omicron	π, ϖ	pi
ρ, ϱ	rho	σ	sigma	τ	tau	υ	upsilon
ϕ, φ	phi	χ	chi	ψ	psi	ω	omega

Capital Greek letters used in mathematics

B	Beta	Γ	Gamma	Δ	Delta	Θ	Theta
Λ	Lambda	Ξ	Xi	Π	Pi	Σ	Sigma
Υ	Upsilon	Φ	Phi	Ψ	Psi	Ω	Omega



مكتبة

A to Z

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تواصي المحاضرات

Group

