

PREPARAZIONE ESAME ORALE DI INGLESE:

PARTE 0:

Tipi di vocali e tavola fonetica:

Foglio allegato

Vocali corte:

ship

win

Vocali lunghe:

sheep

Vocali diphthong:

wine

Pronunce -ed:

Foglio allegato

Pronuncia h e th:

h:

Può essere muta:

honest

hour

heir

O no:

hotel

hi

th:

voiced sound:

Simile alla v.

Suono che porta in vibrazione le corde vocali.

Esempio:

then

that

algorithm

voiceless sound:

Simile alla f.

Esempio:

think

arithmetic

math

Tabella di matematica.

Foglio allegato.

PARTE A:

Countable nouns (Numerabili):

One book, two books
coin

Uncountable nouns (Non numerabili):

milk
money

the, a, an, zero article

the

definite article

The car I've just stolen.

Other uses:

specific geographical points

the North Pole

rivers, oceans and seas

the Nile

special single word

the sun, the rain

unions

the USA

multiple areas

the Netherlands

a/an

indefinite article

an essential tool

a crazy man

In un testo di matematica: present simple, past simple, will, present perfect, passivo

Foglio allegato

Conditional con esempi:

Zero conditional (Fatto ovvio):

If I study I learn something.

If+present simple , present simple

First conditional (Descrizione di una relazione causa effetto):

If I have some money I'll go to Berlin.

If+present simple , future (will+basic form)

Second conditional (Fatto possibile/improbabile):

If I had some money I would visit Sidney.

If I were Einstein, I would study Physics.

If I were you...

If+past simple , future (would+basic form)

Third conditional (Condizione immaginaria sul passato):

If I had had a car, I would have used for my holiday.

If+past perfect , future (would+present perfect)

Comparativo e superlativo:

Esempio di comparativo:

Giorgio is taller than Maria

Esempio di Superlativo:

Mario is the tallest man I've ever seen.

Tre esempi di verbi modali con significato

Can (Potere):

I can walk for one hour than I've to stop.

Use:

To show ability, suggest possibility, ask or give permission, show impossibility.

May (Potere al condizionale):

May I call you at 7 P.M.

Use:

To ask or give formal permission, show possibility.

Have to (Avere da):

We have to go.

Use:

To show necessity or lack of necessity.

PARTE B:

Overview of basic algebraic structures: Groups, Equivalence Relations and division by m

Definition (Group):

Is a set of elements with a binary operation (A function from G to G).

A group has some additional properties:

Closure

Associative

Existence of an identity element

For every x belonging to G exist an inverse element

If the group respects the axiom of commutativity we say that the group is an Abelian Group

Definition (Subgroup)

subset which forms a structure of group under the operation of the group.

Theorem:

H subgroup of G if and only if is a non-empty subset of G with two properties:

a, b belong to G implies ab belongs to G

a belongs to G implies a^{-1} belongs to G

Definition (Cyclic group):

A cyclic group is a group generated by a single element.

Example:

\mathbb{Z}

Definition (Order of a group):

It is the cardinality of the Group.

Definition (Order of an element):

The order of an element is the smallest positive integer such that $a^m = e$.

Lagrange's theorem (Element version):

The order of an element divides the order of the group.

Theorem:

Every cyclic group is isomorphic to \mathbb{Z} (zed, integers) or $\mathbb{Z}/m\mathbb{Z}$ (Integers modulo m)

 \mathbb{Z} in a group with addition**What is $\mathbb{Z}/m\mathbb{Z}$?**

Integers modulo m means:

division by m ,

Relation of congruence

Particular kind of equivalence relation:

Is a binary relation with some additional properties:

reflexivity

Symmetry

Transitivity

Example:

Friendship is NOT an equivalence relation.

If I conjecture...

“be higher than...” is an equivalence relation

Conclusion:

Every cyclic Group is isomorphic to $\mathbb{Z}/m\mathbb{Z}$