

Zahrat Al-Sahra'a International School

Grade 10 to 11 Entrance Exam

Required Lessons

Academic Year 2019-2020

Math

Algebra

L5-1: Polynomial Functions.
L5-2: Polynomial, Linear factors, and zeros.
L5-3: Solving Polynomial Equations.
L5-4: Dividing Polynomials
L5-5: Theorems About Roots of Polynomials Equations.
L5-6: The Fundamental Theorem of Algebra.
L5-9 Transforming Polynomial Functions.
L6-1: Roots and Radical Expressions.
L6-2: Multiplying and Dividing Radical Expressions.
L6-3: Binomial Radical Expressions.
L6-4: Rational Exponents.
L6-5: Solving Square Roots and Other Radical Equations
L6-6: Function Operations.
L6-7: Inverse Relations and Functions.
L6-8: Graphing Radical Functions.
L7-1: Exploring Exponential Models.
L7-2: Properties of Exponential Functions.
L7-3: Logarithmic Function as inverse.
L7-4: Properties of Logarithms.
L7-6: Natural Logarithms
L8-1: Inverse Variation.

L8-2: The Reciprocal Function Family.
L8-3: Rational Function and Their Graphs.
L8-4: Rational Expressions.
L8-5: Adding and Subtracting Rational Expressions.
L8-6: Solving Rational Equations.
L9-2: Arithmetic Sequences.
L9-3: Geometric Sequences.
L9-4: Arithmetic Series.
L9-5: Geometric Series.
L11-1: Permutation and Combination.
L11-2: Probability.

Geometry

L11-1: Space Figures and Cross Sections.
L11-2: Surface Areas of Prisms and Cylinders.
L11-3: Surface Areas of Pyramids and Cones.
L11-4: Volumes of Prisms and Cylinders.
L11-5: Volumes of Pyramids and cones.
L11-6: Surface Areas and Volumes of Spheres.
L11-7: Areas and Volumes of Similar Solids.
L12-1: Tangent Lines.
L12-2: Chords and Arcs.
L12-3: Inscribed Angles
L12-4: Angle Measures and Segment Lengths.
L12-5: Circles in the Coordinate Plane.

Arabic

- المتّمّمات المجرورة .
- المتّمّمات المنصوبة .
- الأوجه البلاغيّة : استعارة - طباق - جناس - سجع

English

Literary Skills

1. Figures of speech: Hyperbole, Pun, Metaphor,
2. Paradox, Oxymoron, synecdoche, amplification, & irony
3. symbolism, onomatopoeia, alliteration, consonance, assonance, simile, Anaphora, & imagery
4. Literary Focus: Symbolic Meaning
5. Reading Focus: Visualizing the story
6. Reading Focus: Visualizing
7. Literary Focus: Omniscient Narrator
8. Literary Focus: Magic Realism and Irony
9. Literary Focus: Appeals to Emotion
10. Literary Focus: Tragedy
11. Reading Focus: Understanding Sequence of Events
12. Reading Focus: Summarizing
13. Reading Focus: Analyzing Details
14. Reading Focus: Identifying Writer's Purpose
15. Literary Focus: Setting and Mood

Grammar and Mechanics

1. Phrases: Prepositional /Adjective /Adverb / Participial/Gerund
2. Clauses: Adjective/Adverb/Noun
3. Subject -Verb Agreement
4. Pronoun -Antecedent Agreement
5. Using Pronouns Correctly / Clear Pronoun Reference
6. Using Verbs Correctly / Modals / Active Passive Voice
7. Placement of Modifiers:
8. Misplaced and Dangling Modifiers
9. Commas, Semicolons, Colons, hyphens, Quotation Marks, italics, dashes, capitalizations, plurals, numbers, using the right word

Sciences

Physics

Lesson Title

Motion in one dimension and two dimensions

Simple harmonic motion

Forces and Laws of Motion

Sound and Harmonics

Work and Energy

Light refraction- Heat and Temperature

Impulse and momentum

Thermodynamic laws

Chemistry

Lesson Title

Gas laws

Stoichiometry

Solutions and Concentration

Oxidation and Reduction

Atomic structure

Arrangement of electrons in an atom

Chemical bonding and chemical formulas

Biology

Lesson Title

Human Biology

Cells

Animals

Plants

Classification and Diversity

Genetics

Evolution