

MITA International School Syllabus 2019

三田国際学園中学校・高等学校 2019年度 シラバス

Grade Level / Course 学年 / コース	J2 Advanced	Subject Area / Class 教科 / 科目	Mathematics	Class hours 時間数	6 hours per week
----------------------------------	-------------	---------------------------------	-------------	--------------------	------------------

1学期 中間試験 Term 1 Midterm

Name of Unit, Project 単元名	Calculating with expressions	Textbooks / Materials 使用教科書 / 教材	Gateway to the Future Math 2 (Keirinkan); Shin-Chu-Mon for 8 th grade
------------------------------	------------------------------	-------------------------------------	--

Unit Description 単元の概要	Students will be able to translate real life situations into the language of mathematics. Students will be able to use algebraic expressions and transform equalities. Students will be able to add, subtract, multiple, and divide expressions.
---------------------------	--

Unit Standards 本単元の内容と評価規準			Others 備考
楽 A3	B3	C3	<評価方法> <ICT> Students will be introduced to Khan Academy. They will complete exercises on Khan Academy throughout the year.
好 A2 Translate words into a math expression.	B2	C2	
知 A1 Understand and use key vocabulary.	B1 Solve algebraic expressions.	C1	
Recognition	Logical Thinking	Creative Thinking	

MITA International School Syllabus 2019

三田国際学園中学校・高等学校 2019年度 シラバス

Grade Level / Course 学年 / コース	J2 Advanced	Subject Area / Class 教科 / 科目	Mathematics	Class hours 時間数	6 hours per week
1学期 期末試験 Term 1 Final					
Name of Unit, Project 単元名	Simultaneous Equations	Textbooks / Materials 使用教科書 / 教材	Gateway to the Future Math 2 (Keirinkan); Shin-Chu-Mon for 8 th grade		
Unit Description 単元の概要	Students will be able to solve linear equations with two unknowns using the substitution and elimination method. Students will be able to use systems of equations to solve application problems. Students will be able to solve equations in the form $A = B = C$.				
Unit Standards 本単元の内容と評価規準				Others 備考	
楽	A3	B3	C3	<評価方法> <ICT・Creation> Students will continue to make more and more use of Khan Academy.	
好	A2 Translate a word problem into a system of equations.	B2	C2		
知	A1 Understand and use key vocabulary.	B1 Solve simultaneous equations.	C1 Solve real-life situations using simultaneous equations.		
	Recognition	Logical Thinking	Creative Thinking		

MITA International School Syllabus 2019

三田国際学園中学校・高等学校 2019年度 シラバス

Grade Level / Course 学年 / コース	J2 Advanced	Subject Area / Class 教科 / 科目	Mathematics	Class hours 時間数	6 hours per week
2学期 中間試験 Term 2 Midterm					
Name of Unit, Project 単元名	Linear Functions	Textbooks / Materials 使用教科書 / 教材	Gateway to the Future Math 2 (Keirinkan); Shin-Chu-Mon for 8 th grade		
Unit Description 単元の概要	Students will understand the definition and forms of a linear function. Students will be able to graph linear functions. Students will understand the link between equations and graphs.				
Unit Standards 本単元の内容と評価規準				Others 備考	
楽 A3	B3 Use a linear equation to model temperature, distance, etc.	C3	<評価方法> <ICT・Creation> Students will use Geogebra and Desmos to graph linear functions and solve systems of equations.		
好 A2 Use linear equations to calculate temperature, distance, etc. Calculate slope.	B2 Understand the link between systems of linear equations and graphs of linear equations.	C2 Use linear expressions to break down a word problem.			
知 A1 Understand and use key vocabulary.	B1 Solve linear equation word problems.	C1 Define, evaluate, and compare functions.			
Recognition	Logical Thinking	Creative Thinking			

MITA International School Syllabus 2019

三田国際学園中学校・高等学校 2019年度 シラバス

Grade Level / Course 学年 / コース	J2 Advanced	Subject Area / Class 教科 / 科目	Mathematics	Class hours 時間数	6 hours per week
2学期 期末試験 Term 2 Final					
Name of Unit, Project 単元名	Investigating Figures	Textbooks / Materials 使用教科書 / 教材	Gateway to the Future Math 2 (Keirinkan); Shin-Chu-Mon for 8 th grade		
Unit Description 単元の概要	<p>Students will understand the properties of angles and conditions for parallel lines.</p> <p>Students will learn how to make a mathematical proof.</p> <p>Students will learn how to use the ASA, SSA, SAS, and SSS congruence theorems.</p>				
Unit Standards 本単元の内容と評価規準				Others 備考	
楽 A3	B3	C3	<評価方法> <ICT・Creation> Students will continue using Desmos and Khan Academy.		
Solve word problems using congruence theorems.					
好 A2	B2	C2			
Show that two triangles are congruent.	Critique a classmate's proof.	Use geometric properties to break down a word problem.			
知 A1	B1	C1			
Understand and use key vocabulary.	Understand the components of a mathematical proof.	Organize mathematical reasoning into a structured proof.			
Recognition	Logical Thinking	Creative Thinking			

MITA International School Syllabus 2019

三田国際学園中学校・高等学校 2019年度 シラバス

Grade Level / Course 学年 / コース	J2 Advanced	Subject Area / Class 教科 / 科目	Mathematics	Class hours 時間数	6 hours per week
----------------------------------	-------------	---------------------------------	-------------	--------------------	------------------

3学期 期末試験 Term 3 Final

Name of Unit, Project 単元名	Properties of Figures and Proofs; Probability	Textbooks / Materials 使用教科書 / 教材	Gateway to the Future Math 2 (Keirinkan); Shin-Chu-Mon for 8 th grade
------------------------------	---	-------------------------------------	--

Unit Description 単元の概要	Students will understand the conditions for parallelograms and the properties of quadrilaterals. Students will solve isosceles and right triangles. They will learn the HL and HA congruence theorems. Students will calculate probabilities and perform permutation / combination calculations.
---------------------------	--

Unit Standards 本単元の内容と評価規準			Others 備考
察 A3 Investigate patterns of association in bivariate data.	B3 Model a mathematical game using probability.	C3 Make a valid mathematical proof for a theorem in the textbook.	<評価方法> <ICT・Creation> Students will use Python to find probabilities.
好 A2 Accurately calculate probabilities.	B2 Critique a classmate's proof.	C2 Use geometric properties to break down a word problem.	
知 A1 Understand and use key vocabulary.	B1 Understand the components of a mathematical proof.	C1 Organize mathematical reasoning into a structured proof.	
Recognition	Logical Thinking	Creative Thinking	