

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	S1 ICA	Subject Area / Class 教科 / 科目	Math I	Class hours 時間数	4 hours per week
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1学期 中間試験 Term 1 Midterm

Name of Unit, Project 単元名	Ch 4: Quadratic Functions	Textbooks / Materials 使用教科書 / 教材	Algebra 2 (Glencoe 2014 Common Core)
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Unit Description 単元の概要	<p>Students will learn how to graph and analyze the graphs of quadratic functions.</p> <p>Students will learn how to perform operations with complex numbers and how to graph in the complex plane.</p> <p>Students will learn how to solve and graph quadratic inequalities.</p>
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Unit Standards 本単元の内容と評価規準			Others 備考
知 A3 Solve application problems using quadratics.	B3 Use quadratics to model a situation.	C3	<評価方法> <ICT・Creation> Students will be introduced to Khan Academy and Google Classroom. They will complete assignments on these platforms throughout the year.
好 A2 Solve quadratic equations.	B2 Graph quadratic equations by hand.	C2	
知 A1 Understand and use key vocabulary.	B1 Understand the relationship between a quadratic equation and a parabola.	C1	
Recognition	Logical Thinking	Creative Thinking	

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Grade Level / Course 学年 / コース	S1 ICA	Subject Area / Class 教科 / 科目	Math I	Class hours 時間数	4 hours per week
1学期 期末試験 Term 1 Final					
Name of Unit, Project 単元名	Ch 5: Polynomial Functions; Ch 6: Inverses and Radicals	Textbooks / Materials 使用教科書 / 教材	Algebra 2 (Glencoe 2014 Common Core)		
Unit Description 単元の概要	<p>Students will learn how to do operations with polynomials. They will learn dimensional analysis.</p> <p>Students will learn how to do operations on functions. They will learn how to find function inverses.</p> <p>Students will learn how to use rational exponents and solve equations with radicals.</p>				
Unit Standards 本単元の内容と評価規準				Others 備考	
糸	A3 Solve application problems using polynomials and/or radical functions.	B3 Use radical functions to model a situation.	C3	<p><評価方法></p> <p><ICT・Creation> Students will use Desmos to analyze graphs of various functions.</p>	
好	A2 Perform operations on functions.	B2 Graph radical functions.	C2		
知	A1 Understand and use key vocabulary. Simplify polynomials.	B1 Understand the connection between inverses and their graphs.	C1 Solve problems using dimensional analysis.		
	Recognition	Logical Thinking	Creative Thinking		

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Grade Level / Course 学年 / コース	S1 ICA	Subject Area / Class 教科 / 科目	Math I	Class hours 時間数	4 hours per week
2学期 中間試験 Term 2 Midterm					
Name of Unit, Project 単元名	Ch. 7: Exponential and Logarithmic Functions and Relations	Textbooks / Materials 使用教科書 / 教材	Algebra 2 (Glencoe 2014 Common Core)		
Unit Description 単元の概要	<p>Students will learn how to graph exponential and logarithmic functions.</p> <p>Students will learn how to solve exponential and logarithmic equations.</p> <p>Students will learn how to solve application problems involving compound interest and population growth.</p>				
Unit Standards 本単元の内容と評価規準				Others 備考	
知	A1 Understand and use key vocabulary.	B1 Understand the relationship between exponential and logarithmic graphs.	C1 Use exponential functions to find compound interest.	<p><評価方法></p> <p><ICT・Creation> Students will use Desmos to solve compound interest and population growth problems.</p> <p>Group Project: Exponential Growth and Zombies.</p>	
好	A2 Solve exponential equations.	B2 Graph exponential functions.	C2 Solve growth problems.		
楽	A3 Solve application problems involving exponentials.	B3 Use exponential functions to model a situation.	C3		
	Recognition	Logical Thinking	Creative Thinking		

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2学期 期末試験 Term 2 Final					
Name of Unit, Project 単元名	Ch. 8: Rational Functions and Relations	Textbooks / Materials 使用教科書 / 教材	Algebra 2 (Glencoe 2014 Common Core)		
Unit Description 単元の概要	<p>Students will learn how to do operations with rational expressions.</p> <p>Students will learn how to graph rational expressions and analyze features of the graph.</p> <p>Students will learn how to solve application problems such as finding a weighted average.</p>				
Unit Standards 本単元の内容と評価規準				Others 備考	
楽	A3 Find a weighted average. Solve application problems.	B3 Model a situation using rational functions.	C3	<評価方法> <ICT・Creation> Students will use Khan Academy and Desmos for various exercises and graphing in this unit.	
好	A2 Solve rational equations.	B2 Graph rational functions.	C2 Recognize and solve inverse and combined variation problems.		
知	A1 Understand and use key vocabulary.	B1 Connect graphs of rational functions with their equation.	C1 Recognize and solve direct and joint variation problems.		
	Recognition	Logical Thinking	Creative Thinking		

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Grade Level / Course 学年 / コース	S1 ICA	Subject Area / Class 教科 / 科目	Math I	Class hours 時間数	4 hours per week
3学期 期末試験 Term 3 Final					
Name of Unit, Project 単元名	Ch 12: Trigonometric Functions		Textbooks / Materials 使用教科書 / 教材	Algebra 2 (Glencoe 2014 Common Core)	
Unit Description 単元の概要	<p>Students will learn the definition of the trigonometric functions and use them to find side lengths and angle measures.</p> <p>Students will draw angles in standard position. They will learn how to convert between radian and degree measure.</p> <p>Students will use trigonometric functions to solve real-world problems such as calculating an unknown distance.</p>				
Unit Standards 本単元の内容と評価規準			Others 備考		
察	A3 Solve real-world problems using trig functions.	B3 Model using trigonometric functions.	C3	<評価方法> <ICT・Creation> Students will use Khan Academy and Desmos to study trigonometric functions.	
好	A2 Find values of trigonometric functions.	B2 Graph trig functions.	C2 Choose methods to solve triangles.		
知	A1 Understand and use key vocabulary. Convert between radians and degrees.	B1 Use trigonometry to solve triangles.	C1 Describe and graph other trigonometric functions.		
	Recognition	Logical Thinking	Creative Thinking		