

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	S2 ICA	Subject Area / Class 教科 / 科目	Math II	Class hours 時間数	4 hours / week
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1学期 中間試験 Term 1 Midterm

Name of Unit, Project 単元名	Ch. 2: Power, Polynomial, And Rational Functions	Textbooks / Materials 使用教科書 / 教材	Precalculus (2014 Glencoe Common Core edition)
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Unit Description 単元の概要	Students will learn how to model real-world data with polynomial functions. Students will learn how to find real and complex zeros of polynomial functions. Students will learn how to analyze and graph rational functions.
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Unit Standards 本単元の内容と評価規準			Others 備考
<b>知 A3</b> Solve application problems involving rational functions.	<b>B3</b> Use polynomial and rational functions to model a situation.	<b>C3</b>	<ICT・Creation> Students will be introduced to Khan Academy and Google Classroom. They will complete assignments on these platforms throughout the year.
<b>好 A2</b> Solve rational equations.	<b>B2</b> Utilize the theorems in the chapter to find all zeros of a polynomial function by hand.	<b>C2</b>	
<b>知 A1</b> Understand and use key vocabulary.	<b>B1</b> Graph polynomial Functions by hand.	<b>C1</b>	
Recognition	Logical Thinking	Creative Thinking	

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1学期 期末試験 Term 1 Final

Name of Unit, Project 単元名	Ch 3 Exponential And Logarithmic Functions	Textbooks / Materials 使用教科書 / 教材	Precalculus (2014 Glencoe Common Core edition)
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Unit Description 単元の概要	<p>Students will learn how to evaluate, analyze, and graph exponential and logarithmic functions.</p> <p>Students will learn how to solve exponential and logarithmic equations.</p> <p>Students will learn how to model data using exponential, logarithmic, and logistic functions.</p>
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Unit Standards 本単元の内容と評価規準			Others 備考
<p>糸 <b>A3</b> Solve application problems involving exponentials.</p>	<p><b>B3</b> Use exponential functions to model a situation.</p>	<p><b>C3</b></p>	<p>&lt;ICT・Creation&gt; Students will use Desmos to analyze graphs of various functions.</p>
<p>好 <b>A2</b> Solve exponential equations.</p>	<p><b>B2</b> Graph exponential functions.</p>	<p><b>C2</b> Solve growth problems.</p>	
<p>知 <b>A1</b> Understand and use key vocabulary.</p>	<p><b>B1</b> Understand the relationship between exponential and logarithmic graphs.</p>	<p><b>C1</b> Use exponential functions to find compound interest.</p>	
Recognition	Logical Thinking	Creative Thinking	

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2学期 中間試験 Term 2 Midterm

Name of Unit, Project 単元名	Ch 4 Trigonometric Functions	Textbooks / Materials 使用教科書 / 教材	Precalculus (2014 Glencoe Common Core edition)
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Unit Description 単元の概要	<p>Students will learn how to use trigonometric functions to solve right triangles.</p> <p>Students will learn how to find values of trigonometric functions of any angle.</p> <p>Students will learn how to graph trigonometric and inverse trigonometric functions.</p>
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Unit Standards 本単元の内容と評価規準			Others 備考
<b>知</b> <b>A3</b> Solve real-world problems using trig functions.	<b>B3</b> Model using trigonometric functions.	<b>C3</b>	<ICT・Creation> Students will use Khan Academy and Desmos to study trigonometric functions.
<b>好</b> <b>A2</b> Find values of trigonometric functions.	<b>B2</b> Graph trig functions.	<b>C2</b> Choose methods to solve triangles.	
<b>知</b> <b>A1</b> Understand and use key vocabulary. Convert between radians and degrees.	<b>B1</b> Use trigonometry to solve triangles.	<b>C1</b> Describe and graph other trigonometric functions.	
<b>Recognition</b>	<b>Logical Thinking</b>	<b>Creative Thinking</b>	

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<b>2学期 期末試験 Term 2 Final</b>					
Name of Unit, Project 単元名	Ch 5 Trigonometric Identities And Equations	Textbooks / Materials 使用教科書 / 教材	Precalculus (2014 Glencoe Common Core edition)		
Unit Description 単元の概要	<p>Students will learn how to use and verify trigonometric identities.                  Students will learn how to solve trigonometric equations.                  Students will learn how to use trigonometric identities to evaluate trigonometric expressions and solve equations.</p>				
Unit Standards 本単元の内容と評価規準				Others 備考	
知	<b>A1</b> Understand and use key vocabulary.	<b>B1</b> Use trig identities to find the value of a given expression.	<b>C1</b> Use and verify trig identities.	<ICT・Creation> Students will use Khan Academy to find and verify trig identities.	
好	<b>A2</b> Use and verify trig identities.	<b>B2</b> Use trig identities to solve a trig equation.	<b>C2</b> Choose methods to find the exact value of a trig expression.		
楽	<b>A3</b> Solve real-world problems using trig identities.	<b>B3</b>	<b>C3</b>		
	Recognition	Logical Thinking	Creative Thinking		

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3学期 期末試験 Term 3 Final

Name of Unit, Project 単元名	Ch. 8 Vectors; Ch 9 Polar Coordinates And Complex Numbers	Textbooks / Materials 使用教科書 / 教材	Precalculus (2014 Glencoe Common Core edition)
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Unit Description 単元の概要	Students will learn how to represent and operate with vectors algebraically in the two- and three-dimensional coordinate systems. Students will learn how to find dot products and cross products. Students will learn how to graph polar coordinates and how to convert between polar and rectangular forms.
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Unit Standards 本単元の内容と評価規準			Others 備考
<b>知</b> <b>A3</b> Solve real-world problems using vectors	<b>B3</b> Model using vectors.	<b>C3</b>	<ICT・Creation> Students will use Khan Academy and Desmos for various exercises and graphing in this unit.
<b>好</b> <b>A2</b> Find resultant vectors.  Calculate dot products and cross products.	<b>B2</b> Graph vectors in 3-dimensional space.	<b>C2</b> Find roots of complex numbers.	
<b>知</b> <b>A1</b> Understand and use key vocabulary.  Distinguish between scalar and vector quantities.	<b>B1</b> Find the distance between points given in polar form.	<b>C1</b> Use DeMoivre's Theorem to find products, quotients, and powers of algebraic expressions given in rectangular form.	
<b>Recognition</b>	<b>Logical Thinking</b>	<b>Creative Thinking</b>	