

JESUIT HIGH SCHOOL

# SUMMER SESSION ONE

June 20 - July 21, 2023



[JESUITPORTLAND.ORG/SUMMERSESSION](https://jesuitportland.org/summer-session)

# Registration & Session Information

**\* Registration for Grade-School Families, Middle-School Families and Jesuit Families Opens APRIL 14. \***

**\* Registration for High-School Families That DO NOT Attend Jesuit Opens APRIL 28. \***

## ABOUT

An integral part of Jesuit High School's mission, Summer Session One serves students in the Ignatian tradition, providing curricula that supports regular school programming, that offers academic enrichment, and that provides academic remediation. Open to the public, most Summer Session One courses begin Tuesday, June 20 and conclude Friday, July 21. Check the course catalog for specific dates and times. Courses are available for students in grades 3-12, and class sizes are limited so that teachers can provide individualized instruction. Courses are divided into three sections: Jesuit Campus Courses (J), Online Courses (O), and Asynchronous Courses (A).

Summer Session Two courses take place July 24 - August 18. For information about Summer Session Two, email Dr. John Gorman: [jgorman@jesuitportland.org](mailto:jgorman@jesuitportland.org). For the Summer Session Two course catalog, visit the Summer Session webpage on the Jesuit website.

## CONTACT

If you have questions about Summer Session One, which runs June 20 to July 21, email René Villareal, Director of Summer Session, or Susie Rall, Summer Session Registrar: [summersession@jesuitportland.org](mailto:summersession@jesuitportland.org). Summer Session email hours are 7:00 a.m.-2:00 p.m., Monday through Friday. Summer Session can also be reached at (503) 291-5495.

## REGISTRATION

1. Registration opens on **April 14** for grade-school students, for middle-school students and for current Jesuit students. Registration opens on **April 28** for high school students who DO NOT attend Jesuit.
2. Registration is online only, and will not be taken over the phone or via email. Phone or email inquiries will not hold seats in classes. Registration is first-come-first-served.
3. Some classes have prerequisites. Please pay close attention to these requirements upon registration.
4. Jesuit sophomores, juniors and seniors should provide their JMail addresses at registration. For incoming freshmen and non-Jesuit students, however, it is important that they provide a **personal email that the student owns or regularly accesses**. It is advised that **incoming freshmen not use their middle-school**

**email addresses at registration** and that **Beaverton School District (BSD) and Portland Public Schools (PPS) students not use their school-issued email addresses at registration** as many schools will discontinue these accounts at the conclusion of the regular school year. It is also advised that **current middle-school students not use their middle-school email addresses at registration** as some of these accounts are unable to receive email from outside organizations.

## **EARLY REGISTRATION DISCOUNT**

Registration completed by Friday, June 2, 2023 will receive a \$25 discount. See the “Course Descriptions” section for tuition amounts.

## **ATTENDANCE POLICY**

1. Classes will not be held on Monday, June 19 and Tuesday, July 4.
2. To report an absence, email your student’s teacher directly and also Susie Rall, Summer Session Registrar ([summersession@jesuitportland.org](mailto:summersession@jesuitportland.org)) by 8:00 a.m. A Teacher Email Directory will be emailed to parents and will also be available on the Summer Session web page. You may also call (503) 291-5460 and leave a message.
3. A student who misses more than two class days may only take a course for non-credit. Although challenging, it is still possible to use the course for advancement.
4. Online classes are run synchronously, in real-time via Zoom, exceptions being courses listed as Asynchronous: #140-A Accelerated Geometry, #148-A, Accelerated Algebra II/Trig, and #150-A, Precalculus. These courses are self-paced. Otherwise, the times associated with online courses indicate when students are required to meet virtually with their instructors via Zoom.
5. The following constitutes an absence:
  - For a Jesuit Campus course, student does not attend in-person.
  - For an Online Course, student does not attend synchronous class meeting via Zoom and/or does not complete classwork during allotted meeting time due to illness or other conflicts.

## **WITHDRAWAL AND REFUND POLICY**

1. All withdrawals must be emailed to Susie Rall, Summer Session Registrar: [summersession@jesuitportland.org](mailto:summersession@jesuitportland.org).
2. Withdrawal fees are based on the following deadlines:

June 9	\$35 Fee
June 10-18	\$65 Fee
June 19-23	\$95 Fee
After June 23	No Refund

## **CODE OF CONDUCT**

Whether online or in-person, students are expected to treat faculty, staff, students and physical property with respect. Students who fail to do so will be asked to leave the program. Classroom expectations, both online and in-person, will be reviewed on the first day of class.

## **CLASS CANCELLATIONS**

Under-enrolled classes may be canceled. Families will be notified of such cancellations.

## **CREDIT CLASSES FOR NON-JESUIT STUDENTS**

Jesuit High School is fully accredited by AdvancEd. Prior to the conclusion of Summer Session, students and families will receive a Credit Selection Form, at which time they will indicate taking a credit course for credit (letter grade), for credit (pass/fail), or for non-credit. Non-Jesuit students are advised that missing more than two days of class will result in earning non-credit for a credit course.

To determine if Summer Session credit is accepted by their schools, students should consider the following:

- Jesuit High School does not guarantee that Summer Session credit will be accepted by schools other than Jesuit.
- Before classes begin, students are responsible for checking with their school administration to determine if Jesuit Summer Session credit is acceptable.
- Grades will be sent to schools upon receiving a signed Credit Selection Form that will be distributed prior to the conclusion of the Summer Session.

## **CREDIT CLASSES FOR JESUIT STUDENTS**

A credit course has three options for enrollment:

1. **For credit (letter grade):** The class will be included in the student's Jesuit High School transcript with a letter grade, but the grade will not be calculated into the GPA. Exceptions include U.S. History and courses being remediated during Summer Session One; grades that students earn in U.S. History and courses being remediated will be calculated into the GPA.
2. **For credit (pass/fail):** The class will be included in the student's Jesuit High School transcript, but the grade will not be calculated into the GPA. A final grade of 70% or greater is passing.
3. **For non-credit:** The class will not be included in the student's transcript. This is the only option for a student who misses more than two days of class.

Prior to the conclusion of Summer Session, students and families will receive a Credit Selection Form, at which time they will indicate taking a credit course for credit (letter grade), for credit (pass/fail), or for non-credit. Missing more than two days of class will result in earning non-credit for a credit course.

Jesuit students and families should consider the following as it pertains to transcripts and Fall placements:

- Jesuit High School transcripts will include Summer Session classes taken for credit by incoming freshmen.

- Classes taken prior to the summer before a student's freshman year at Jesuit will not be included in the student's high school transcript.
- Students may use Summer Session classes to move ahead in their placement for a Jesuit math course in the Fall. Receiving credit for a math course does not determine Fall math placement. Requirements for advancement are described in course descriptions and will be explained on the first day of class. Furthermore, requirements typically include a final grade of A- or higher and the recommendation of the Summer Session teacher. In some cases, a student may be asked to complete a placement exam to help determine appropriate Fall placement.

## **FREQUENTLY ASKED QUESTIONS (FAQ)**

### **1. What is Jesuit's mask policy on campus?**

Jesuit does not require that masks be worn on campus. It is the choice of students, faculty, staff and guests to determine if they will wear a mask on campus. We will continue to monitor the medical advice provided by the CDC, the OHA, the ODE, and our local county medical experts.

### **2. Do online courses meet at specific times?**

Yes. Online classes are run synchronously, in real-time via Zoom. The times associated with each course indicate when students are required to meet virtually with their instructors. At their discretion, however, teachers may implement self-paced activities during these times. Therefore, it is important that students join Zoom promptly so that they are aware of the day's agenda. Students and families are advised that Jesuit offers only three online classes that are asynchronous, or self-paced: #140-A Accelerated Geometry, #148-A, Accelerated Algebra II/Trig, and #150-A, Precalculus. For listings of Online and Asynchronous courses, see the "Online Courses" and "Asynchronous Courses" sections in "Course Descriptions."

### **3. Will Jesuit issue my student a laptop or a tablet for an online course?**

No. Jesuit is unable to issue devices to incoming freshmen, transfer students, and non-Jesuit students. Incoming freshmen, transfer students, and non-Jesuit students will need to use a home desktop, laptop, or tablet with a camera and microphone to complete coursework. Jesuit students who are rising sophomores, juniors, and seniors should use their school-issued iPads.

### **4. Will Jesuit provide a book to my student for an online course?**

No, in most cases. Some online courses will require that families purchase required texts. See course descriptions to determine if an online course requires purchasing texts.

### **5. Will Jesuit provide a book to my student for an in-person course?**

Yes. Teachers will distribute books on the first day for those classes that require them.

### **6. Where will my student access resources and materials for an online course?**

Online courses will use Canvas, a web-based Learning Management System (LMS). Teachers will enroll students into their Canvas courses by using the email that families provide at registration; Jesuit sophomores, juniors and seniors should provide their JMail addresses at registration. For incoming freshmen and non-Jesuit students, however, it is important that they provide an **email that the student owns or regularly accesses**. It is advised that **incoming freshmen not use their middle-school email addresses at registration** and that **BSD and PPS students not use their school-issued email addresses at registration** as many schools will discontinue these accounts at the conclusion of the regular school year. Once students are enrolled in Canvas, they will be able to access course materials, to message the instructor, and to access their course calendar.

## COURSE DESCRIPTIONS

Courses are divided into three sections.

Course Letter	Description
<b>J</b>	Jesuit Campus course that meets in person
<b>O</b>	Online course that occurs synchronously, in real-time via Zoom
<b>A</b>	Asynchronous course that is self-paced and completed online

## Jesuit Campus Courses

Courses listed in this section meet in-person on Jesuit High School's campus. The times associated with each course indicate when students are required to meet in a Jesuit classroom with their instructors. For listings of Online and Asynchronous courses, see the "Online Courses" and "Asynchronous Courses" sections.

### COMPUTER SCIENCE

#### #106-J PYTHON FOR BEGINNERS: GAMES

6/20-7/21

8:00-9:30 a.m.

\$375 by 6/2

\$400 after 6/2

No credit

**Description:** This course is for students new to programming or who have not programmed with Python. Students will acquire the programming skills necessary to create programs of their own. Students will begin learning **basic Python commands and syntax** by writing code for simple text-based logic games. As the course progresses, students will incorporate more complex aspects, including **graphics, animation, and sound**. Although this course will use the Python programming language, the concepts covered in this course will form the foundation necessary to learn other programming languages. Expect 30 minutes of coding homework for each class day.

**Prerequisites:** No previous programming experience is required. The course will require logic skills similar to the level required of a student currently studying algebra 1 or higher.

**Become comfortable using the following statements:**

```
import
while
if
elif
break
def
del
```

**Use standard library functions:**

```
print()
input()
randint()
list()
range()
join()
```

**First learn the basics:**

Apply proper syntax  
Evaluate expressions  
Store values in variables  
Name variables  
Overwrite variables  
Define constant variables  
Import modules  
Use loops to repeat code  
Group with blocks  
Pass arguments to functions  
Incorporate comparison operators

Define conditions  
Call functions  
Write functions  
Return values  
Distinguish between local scope and global scope  
Debug  
Create flowcharts  
Create simple ASCII art  
Access items with indexes  
Concatenate lists  
Slice lists and strings

**Then expand skills:**

Use simple encryption  
Keep score  
Create basic AI algorithms  
Use pygame  
Use a clock to pace a program  
Program keystrokes to manipulate graphics  
Incorporate sound files  
Incorporate image files  
Create options to end or pause a game

## #108-J PYTHON: INTRODUCTION TO CRYPTOGRAPHY

6/20-7/21

10:00 - 11:30 a.m.

\$375 by 6/2

\$400 after 6/2

No credit

**Description:** Students will study several **ciphering techniques**, and use them in **encrypting, decrypting, hacking, and programming**. The course will present basic **number theory** concepts that are key to cryptography. Expect 30 minutes of coding homework for each class day.

**Prerequisites:** Students need to have completed algebra 1 and be familiar with programming logic through experience with any language, but no experience with Python is necessary. All relevant Python language will be explained in the course.

**Topics:**

Programming ethics	Programming the affine cipher
Reverse cipher	Hacking the affine cipher
Caesar cipher	Programming the simple substitution cipher
Hacking the Caesar cipher	Hacking the simple substitution cipher
Encrypting with the transposition cipher	Programming the vigenère cipher
Decrypting with the transposition cipher	Frequency analysis
Encrypting and decrypting files	The one-time pad cipher
Detecting English programmatically	Finding and generating prime numbers
Hacking the transposition cipher	Generating keys for the public key cipher
Modular arithmetic	Programming the public key cipher

## FINE ARTS

**#605-J, DIGITAL ART**

6/20-6/23      9:00-12:00 p.m.      \$120 by 6/2      \$145 after 6/2      No credit

Kickstart your creativity this summer by learning the popular drawing and painting app, Procreate. In just one short week, you will complete 12 mini lessons that are designed to be easy and approachable to help you build confidence and keep you motivated as you learn the essential features of Procreate. At the end of the course, you will have a gallery of beautiful artwork that you've created (themes of food, plants, animals and objects), and you will have gained valuable practice in digital art techniques and drawing skills. The class is perfect for the complete beginner or anyone who wants to learn Procreate. All participants must have an iPad with the Procreate app and a stylus.

## LANGUAGE ARTS

**#200-J, 6th-8th READING**

6/26-7/14      10:30-12:00 p.m.      \$230 by 6/2      \$255 after 6/2      No credit

Join us as we read the story of Castle "Ghost" Cranshaw, a lightning-fast athlete who's running from more than just his competition. This powerful read will be our springboard to hone students' reading comprehension, discussion skills, and analytic and narrative writing. Students will be loaned a copy of *Ghost* by Jason Reynolds on the first day of class.

**#215-J, ELEMENTS OF THE ESSAY**

6/26-6/30      9:00-11:00 a.m.      \$120 by 6/2      \$145 after 6/2      No credit

Although this class targets returning JHS students who need additional help with their essay-writing skills, all students are welcome to attend. The course assumes a basic knowledge of grammar and exposure to different forms of writing during freshman year. The focus is on enhancing the ability to write clear, strong sentences;

developing a writing style; creating and supporting thesis statements; writing coherent paragraphs which start with and develop a topic sentence; practicing the mechanics of academic writing, and expanding on analytical and argumentative writing skills.

### #235-J, COLLEGE ESSAY WRITING

#235-J(a)	6/26-7/7	8:00-10:00 a.m.	\$190 by 6/2	\$215 after 6/2	No credit
#235-J(b)	6/26-7/7	12:30-2:30 p.m.	\$190 by 6/2	\$215 after 6/2	No credit

Rising seniors will develop strategies and techniques for writing effective essays for the college admissions process. They will discern what admissions officers scrutinize in applicants' essays, and students will analyze a variety of model essays. To receive feedback and to generate ideas, students will have opportunities to conference individually with the instructor. By the end of the course, students will write at least one essay for the Common Application and will complete exercises to generate ideas for other possible essays. The class is not intended for students who are not rising seniors.

### #245-J, SUMMER READING SEMINAR

#245-J	6/26-7/7	10:00-12:00 p.m.	\$190 by 6/2	\$215 after 6/2	No credit
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This course will focus on reading the summer reading novel for the Jesuit 2023-2024 school year. The novel chosen for summer reading is *How To Change Everything* by Naomi Klein. The novel explores the complexities of current climate change and how we, as a global community, can impact climate change in a positive manner. Klein tells the stories of young activists to help the reader gain insight into our current situation, while still providing tools and strategies to make change. *How To Change Everything* reveals the present while looking towards a better future. The course will be an intensive reading, discussion-, and writing-based course to help students who may struggle with reading comprehension, might be interested in a community-based form of summer reading, or are trying to get a head start on the school year. We will focus on Socratic seminars, personal reflections, and ample time to read while in class. The goal is to finish and understand the novel together!

## MATHEMATICS

The math courses in this section occur in-person on Jesuit High School's campus. The times associated with each course indicate when students are required to meet in a Jesuit classroom with their instructors. For listings of Online and Asynchronous math courses, see the "Online Courses" and "Asynchronous Courses" sections.

### #011-J, MATHEMATICAL EXPLORATIONS 1

6/20-7/21	9:00-10:30 a.m.	\$380 by 6/2	\$405 after 6/2	No credit
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**Description:** Students will study **place value**, **comparing**, and **addition** through **conversation**, **problem-solving**, and **mathematical puzzles**. *Mathematical Explorations* courses aim to build math skills and mathematical intuition, as well as mathematical curiosity and appreciation. These courses will provide a foundation for studying high-level mathematics later on. The course will use material from *Art of Problem Solving's Beast Academy 2A*.

**Prerequisites:** The ability to count beyond 100 by 1s, 5s, and 10s; the ability to identify basic shapes (circle, square, triangle); the ability to add and subtract numbers 1 through 20; and the ability to solve simple word problems; recommended for rising 3rd-grade students and older who can answer **13 or more** of the problems on [this placement quiz](#). The questions below are examples of class discussion topics. They are not prerequisites.

<b>Challenge 1</b> What three-digit number is 77 tens plus 77 ones?	<b>Challenge 4</b> Circle two three-digit numbers whose sum is 710. The three-digit numbers cannot overlap.  7 3 3 3 7 3 3 3 7
<b>Challenge 2</b> Write four different three-digit numbers that use the digits 0, 1, and 2 once each.	<b>Challenge 5</b> Grogg adds three of the numbers below and gets a sum with ones digit 3. What is Grogg's sum?  45   56   67   78   89
<b>Challenge 3</b> $99 + 99 + 99 + 99 + 99 = 500 - \underline{\hspace{2cm}}$	

## #021-J, MATHEMATICAL EXPLORATIONS 2

6/20-7/21      10:45-12:15 p.m.      \$380 by 6/2      \$405 after 6/2      No credit

**Description:** Students will study **shapes**, **perimeter**, **area**, and **skip-counting** through **conversation**, **problem-solving**, and **mathematical puzzles**. *Mathematical Explorations* courses aim to build math skills and mathematical intuition, as well as mathematical curiosity and appreciation. These courses will provide a foundation for studying high-level mathematics later on. The course will use material from *Art of Problem Solving's Beast Academy 3A*.

**Prerequisites:** A solid understanding of place value and the ability to add and subtract multi-digit numbers; recommended for rising 4th-grade students and older who can answer **12 or more** problems on [this placement quiz](#). The questions below are examples of class discussion topics. They are not prerequisites.

**Challenge 1**

How many different rhombuses can be made by connecting four points in the grid to the right?

**Challenge 2**

Alex has between 9 and 51 coins in his coin collection. The number of coins in his collection is a multiple of 5. If he adds one coin to his collection, then the number of coins will be a multiple of 7. How many coins does Alex have in his collection right now?

**Challenge 3**

Winnie's rectangle has a perimeter of 26 inches. Grogg's rectangle is three inches taller and one inch wider than Winnie's. What is the perimeter of Grogg's rectangle?

**Challenge 4**

Cammie begins skip-counting at 23. While skip-counting, she says the number 68. Which of these numbers is Cammie definitely **not** skip-counting by?

2 3 5 9 15

**#031-J, MATHEMATICAL EXPLORATIONS 3**

6/20-7/21

11:15-12:45 p.m.

\$380 by 6/2

\$405 after 6/2

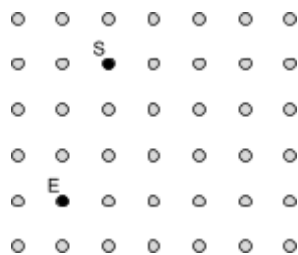
No credit

**Description:** Students will study **geometry**, **angles**, **multiplication**, and **exponents** through **conversation**, **problem-solving**, and **mathematical puzzles**. *Mathematical Explorations* courses aim to build math skills and mathematical intuition, as well as mathematical curiosity and appreciation. These courses will provide a foundation for studying high-level mathematics later on. The course will use material from *Art of Problem Solving's Beast Academy 4A*.

**Prerequisites:** A basic understanding of perimeter and area, two-digit multiplication, division, measurement, fractions, and estimation; recommended for rising 5th-grade students and older who can answer **10 or more** of the problems on [this placement quiz](#). The questions below are examples of class discussion topics. They are not prerequisites.

**Challenge 1**

Label points Q and R on the dot grid to draw square SQRE.

**Challenge 2**

What is the area, in square meters, of a square that has a perimeter of 172

**Challenge 4**

Write  $27^2$  as a power of 3.

**Challenge 5**

Winnie multiplies 5 consecutive whole numbers. What is the units digit of Winnie's product?

**Challenge 6**

Each number below is written in base-2. Circle all of the numbers that are multiples of 4.

10,100 11,100 101,011

meters?

10,000 11,110 1,111,001

### Challenge 3

How much must you add to  $50 \times 70$  to get  $50 \times 71$ ?

## #041-J, MATHEMATICAL EXPLORATIONS 4

6/20-7/21

9:30-11:00 a.m.

\$380 by 6/2

\$405 after 6/2

No credit

**Description:** Students will study **3D geometry**, **integers**, **variables**, **expressions**, and **equations** through **conversation**, **problem-solving**, and **mathematical puzzles**. *Mathematical Explorations* courses aim to build math skills and mathematical intuition, as well as mathematical curiosity and appreciation. These courses will provide a foundation for studying high-level mathematics later on. The course will use material from *Art of Problem Solving's Beast Academy 5A*.

**Prerequisites:** A familiarity with variables, the ability to add and subtract integers and decimals, and the ability to multiply whole numbers with fractions; recommended for rising 6th-grade students and older who can answer **14 or more** of the problems on [this placement quiz](#). The questions below are examples of class discussion topics. They are not prerequisites.

### Challenge 1

Lizzie assembles 125 wood cubes to make one large cube. She paints the large cube green on all six of its faces, then disassembles it back into smaller cubes. How many of the smaller cubes do not have any paint on them?

### Challenge 2

If  $x + y = 7$ , what is  $3x + 3y - 5$ ?

### Challenge 3

Circle all the expressions below that are **negative** for all nonzero values of  $x$ .

$x^2$   $-x^2$   $-(x^2)$   $(-x)^2$   $-(-x)^2$

### Challenge 4

Rosie is 6 years older than her sister Suzie, and Suzie is twice as old as her brother Toby. The sum of all three siblings' ages is 31. How old in years is each sibling?

## #095-J, PROBLEM-SOLVING WITH PREALGEBRA: FUNDAMENTALS

6/20-7/21

9:30-11 a.m.

\$355 by 6/2

\$380 after 6/2

No credit

This course is for students who seek a deep understanding of numbers as they acquire skills necessary for advancement to algebra 1. This course also offers fun puzzle-solving challenges to current algebra 1 students. Students will strengthen mathematical skills and intuition through conversation, problem-solving, and mathematical puzzles. Topics include **properties of arithmetic**, **exponents**, **number theory**, **fractions**, **equations**, and **inequalities**. Students should expect 30 minutes of homework per class.

**Prerequisites:** Students should be able to apply operations (addition, subtraction, multiplication, and division) on multi-digit numbers, negative numbers, fractions, decimals, and variables; and be willing to work on word problems that involve more than one step. The course is a good choice for students who can answer **22 or more** problems on [this placement quiz](#) (some questions have multiple problems).

**Challenge 1**

Compute the product  $25 \cdot (12 \cdot 8)$  in your head.

**Challenge 2**

What is the sum  $5 + 10 + 15 + \dots + 95 + 100$ ?

**Challenge 3**

The squares of two consecutive positive integers differ by 67. What is the smaller of the two integers?

**Challenge 4**

What is the largest multiple of 12 that can be written using each digit 0, 1, 2, ..., 9 exactly once?

**Challenge 5**

Jack finds the product of three different prime numbers. Is it possible for the sum of the digits of Jack's product to be 18? Why or why not?

**Challenge 6**

The reciprocals of what three different positive integers have a sum equal to 1?

**Challenge 7**

If I give my sister 5 dollars, then we will have the same amount of money. If, instead, she gives me 8 dollars, then I'll have twice as much money as she has. How much money does she have?

**Challenge 8**

A road crew took three days to pave a road. On the first day, they paved  $\frac{2}{5}$  of the road, and on the second day, they paved  $\frac{1}{3}$  of the road. On the last day, they paved 1500 yards. How many yards long is the road?

**#110-J, INTRO TO ALGEBRA**

6/20-7/21      8:30-10:00 a.m.      \$355 by 6/2      \$495 after 6/2      No credit

Students prepare to succeed in first-year high school algebra. Topics include order of operations, variables, properties of integers, introduction to equations, rational numbers, inequalities, factors, fractions, exponents, ratios, proportion, functions, and graphing.

**Prerequisites:** Solid understanding of fractions, decimals, units, and measurement

**#115-J, PROBLEM-SOLVING WITH ALGEBRA: VARIABLES, EXPRESSIONS, & EQUATIONS**

6/20-7/21      11:15-12:45 p.m.      \$355 by 6/2      \$380 after 6/2      No credit

**Description:** Students in this class will develop a foundation of basic tools that will be instrumental in mastering algebra. Students will discuss and build skills involving **order of operations, distribution, factoring, equations, exponents, radicals, expressions, and fractions with variables**. Students will then learn to evaluate equations involving **multi-variable expressions, arithmetic with variables, distribution,**

**factoring, fractions with variables, substitution, and elimination.** The course will introduce **adding, subtracting, and simplifying rational expressions**, which are some of the concepts students find most challenging to master in algebra 1. Students should expect 45 minutes of homework per class.

**Prerequisite:** This class is for students with solid prealgebra skills who can successfully complete this [placement quiz](#). The problems below are examples of discussion topics. They are not prerequisites.

<p><b>Challenge 1</b> Write as a single fraction:  <math display="block">\frac{5y}{6x^2} - \frac{4}{3xy}</math></p> <p><b>Challenge 2</b> Expand the product <math>(x + 1)(y + 1)</math>.</p> <p><b>Challenge 3</b> Express <math>\frac{1}{a} + \frac{1}{b} + \frac{1}{c}</math> as a single fraction.</p> <p><b>Challenge 4</b> Solve the system of equations  <math display="block">3x - 2y = 7,</math> <math display="block">5x - y = 9.</math></p>	<p><b>Challenge 5</b> A small farm has chickens and pigs. In total, there are 40 animal legs among the chickens and pigs, and there are 16 animal heads. How many chickens are on the farm?</p> <p><b>Challenge 6</b> My father's age 5 years ago plus twice my age now gives 65, while my age 5 years ago plus three times my father's age now gives 130. What is my father's age?</p> <p><b>Challenge 7</b> Find all possible values of <math>a</math> and <math>b</math> such that the sum of their square roots is 37 and the square root of <math>a</math> is 10 more than twice the square root of <math>b</math>.</p>
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#### #120-J, ALGEBRA I, SEMESTER 1

#120-J(a)	6/20-7/21	8:00-10:00 a.m.	\$470 by 6/2	\$495 after 6/2	1 Sem credit
#120-J(b)	6/20-7/21	10:00-12:00 p.m.	\$470 by 6/2	\$495 after 6/2	1 Sem credit

Students build skills to pursue a future of honors level math classes. The class introduces expressions, equations, functions, and the properties of real numbers. Students solve, graph, and write linear equations, functions, and inequalities. The course concludes with a discussion of systems of equations and inequalities. Students should expect one to two hours of homework per class.

**Prerequisite:** Pre-algebra

**Possible fall placement with department permission:** Honors Algebra 1/Trig

#### #125-J, ALGEBRA I, SEMESTER 2

#125-J(a)	6/20-7/21	9:00-11:00 a.m.	\$470 by 6/2	\$495 after 6/2	1 Sem credit
#125-J(b)	6/20-7/21	11:00-1:00 p.m.	\$470 by 6/2	\$495 after 6/2	1 Sem credit

Students learn about exponents, exponential functions, polynomials, factoring, quadratic equations and functions, radicals, Pythagorean theorem, distance and midpoint formulas, rational equations and functions, and graphing. Students should expect one to two hours of homework per class.

**Prerequisites:** Fall placement into Honors Algebra 1/Trig, or knowledge of the material covered in #120, Algebra I Semester 1 (above)

**Possible fall placement with department permission:** Honors Geometry

### **#138-J, GEOMETRY**

#138-J(a)	6/20-7/21	8:00-10:00 a.m.	\$470 by 6/2	\$495 after 6/2	1 Sem credit
#138-J(b)	6/20-7/21	10:00-12:00 p.m.	\$470 by 6/2	\$495 after 6/2	1 Sem credit

Students learn about Euclidean geometry and prepare for Algebra 2/Trig. Topics include principles of geometric construction; coordinate geometry; properties of triangles; introduction to logic and proofs; properties of polygons and circles; postulates and theorems; congruence; similarity; area; volume; and right triangle trigonometry. Students should expect two hours of homework per class.

**Prerequisites:** Algebra I or the following: the ability to manipulate variables to solve linear equations and inequalities, ability to graph linear equations, and familiarity with simple radical expressions

**Possible fall placement with department permission:** Algebra 2/Trig or Honors Algebra 2/Trig (students should discuss plans for advancement with their instructor before enrolling)

### **#148-J, ACCELERATED ALGEBRA II/TRIG**

#148-J(a)	6/20-7/21	8:00-10:00 a.m.	\$470 by 6/2	\$495 after 6/2	1 Sem Credit
#148-J(b)	6/20-7/21	10:00-12:00 p.m.	\$470 by 6/2	\$495 after 6/2	1 Sem Credit

Students begin with a short review of basic ideas from algebra and geometry, then cover quadratic functions, polynomial functions, and rational exponents. Next, the course discusses the concept of a function, including domain, range, and combinations of functions. Substantial time is spent developing the theory of exponential and logarithmic functions. After a unit on rational functions, the course concludes with one week of trigonometry, from right triangle trig to the unit circle and trigonometric identities. The graphing of functions is emphasized throughout the course. Students taking this course should expect two to three hours of homework per class.

**Prerequisites:** A strong understanding of Algebra 1 and completion of Geometry

**Possible fall placement with department permission:** Honors Precalculus (students should discuss plans for advancement with their instructor before enrolling)

### **#150-J, PRECALCULUS**

#150-J(a)	6/20-7/21	8:00-10:00 a.m.	\$470 by 6/2	\$495 after 6/2	1 Sem credit
#150-J(c)	6/20-7/21	10:00-12:00 p.m.	\$470 by 6/2	\$495 after 6/2	1 Sem credit

Students study polynomial, rational, exponential, logarithmic, and trigonometric functions. Graphing and the concepts of function, domain, and range are emphasized. The course concludes with an introduction to limits and calculus. Students should expect three hours of homework per class.

**Prerequisites:** Strong understanding of first-year algebra and geometry, as evidenced by one of the following: A grade of A- or better in Geometry Honors or Algebra II or a teacher recommendation

**Possible fall placement with department permission:** AP Calculus AB (students should discuss plans for advancement with their instructor before enrolling)

## #160-J, CALCULUS

6/20-7/21      10:00 a.m.-12:00 p.m.      \$470 by 6/2      \$495 after 6/2      1 Sem credit

Students begin their study of differential and integral calculus. Topics include limits, derivatives and their applications, integrals, indefinite integrals, Riemann sums, and definite integrals. The class addresses all material covered by the AP Calculus AB exam. Students should expect three hours of homework per class.

**Prerequisite:** A strong understanding of Precalculus.

**Possible fall placement with department permission:** AP Calculus BC (students should discuss plans for advancement with their instructor before enrolling)

## WORLD LANGUAGES

### #240-J, SPANISH I INTRO/REVIEW/SKIP

6/20-7/21      8:30-10:30 a.m.      \$470 by 6/2      \$495 after 6/2      1 Sem credit

This is a class for middle school students or freshmen who have never studied Spanish or who have limited Spanish knowledge. The course will cover the curriculum of Spanish I. Students in this class may have the opportunity to enter Spanish II in the Fall or they will be able to start Spanish I with a strong foundation.

## Online Courses

Courses listed in this section occur synchronously, in real-time via Zoom. The times associated with each course indicate when students are required to meet virtually with their instructors via Zoom. At their discretion, however, teachers may implement self-paced activities during these times. Therefore, it is important that students join Zoom promptly so that they are aware of the day's agenda. For listings of Asynchronous and Jesuit Campus courses, see the "Asynchronous Courses" and "Jesuit Campus Courses" sections.

## LANGUAGE ARTS

### #235-O, COLLEGE ESSAY WRITING

7/10-7/21      10:00-12:00 p.m.      \$190 by 6/2      \$215 after 6/2      No credit

Rising seniors will develop strategies and techniques for writing effective essays for the college admissions process. They will discern what admissions officers scrutinize in applicants' essays, and students will analyze a variety of model essays. To receive feedback and to generate ideas, students will have opportunities to conference individually with the instructor via Zoom. By the end of the course, students will write at least one essay for the Common Application and will complete exercises to generate ideas for other possible essays. The class is not intended for students who are not rising seniors.

## MATHEMATICS

The math courses in this section occur in real-time on Zoom and are not self-paced. The times associated with each course indicate when students are required to meet virtually with their instructors. Students taking a course for credit will take a final exam on Jesuit's campus on Friday, July 21. For more information about online Math courses, email Dr. John Gorman ([jgorman@jesuitportland.org](mailto:jgorman@jesuitportland.org)). For listings of Asynchronous and Jesuit Campus math courses, see the "Asynchronous Courses" and "Jesuit Campus Courses" sections.

### #138-O, GEOMETRY

6/20-7/21      1:00-3:00 p.m.      \$470 by 6/2      \$495 after 6/2      1 Sem credit

Students learn about Euclidean geometry and prepare for Algebra 2/Trig. Topics include principles of geometric construction; coordinate geometry; properties of triangles; introduction to logic and proofs; properties of polygons and circles; postulates and theorems; congruence; similarity; area; volume; and right triangle trigonometry. Although all work and interaction with the instructor will occur online, note that the final exam will be administered in person on the Jesuit campus.

**Prerequisites:** Algebra I or the following: the ability to manipulate variables to solve linear equations and inequalities, ability to graph linear equations, and familiarity with simple radical expressions

**Possible fall placement with department permission:** Algebra 2/Trig or Honors Algebra 2/Trig (students should discuss plans for advancement with their instructor before enrolling)

### #159-O, PRECALCULUS ENRICHMENT & BRIDGE TO AP CALCULUS AB

6/20-7/7      10:00-12:00 p.m.      \$285 by 6/2      \$310 after 6/2      No credit

Students review major topics from Precalculus, including factoring polynomials; function notation; linear equations; analyzing polynomial functions (intervals where increasing/decreasing and relative max/min); graphing basic functions (quadratic, radical, absolute value, rational, exponential & logarithmic); analyzing rational functions (domain, range, vertical & horizontal asymptotes); properties of logarithms; rational exponents; solving log & exponential equations; trigonometry (unit circle, evaluating the 6 trig functions, trig identities, solving trig equations, inverse trig functions, even/odd trig functions). AP Calculus topics covered: limits & continuity (notation, evaluating limits using direct substitution & other techniques, limits approaching infinity, limits involving piecewise functions, analyzing types of discontinuous functions); derivatives (definition, power rule, product rule, quotient rule, chain rule, implicit, equations of tangent line, trig derivatives); and AP style multiple choice practice problems involving limits, continuity, and derivatives.

**Prerequisite:** Precalculus

### #170-O, BRIDGE TO AP CALCULUS BC & PREPARATION FOR AP EXAM

6/20-7/7      12:30-2:30 p.m.      \$285 by 6/2      \$310 after 6/2      No credit

Students briefly review the major topics from AP Calculus AB including limits, differentiation, application of differentiation, integration, fundamental theorem of calculus, and applications of integration. Emphasis will be

placed on learning strategies and becoming more comfortable with AP-style questions (both multiple choice & free response) in preparation for the AP exam. The two most challenging BC topics will be covered: series & polar graphing. The goal of this course is to give students confidence and a solid foundation going into AP Calculus BC next year.

**Prerequisite:** AP Calculus AB

### #186-O, DIFFERENTIAL EQUATIONS

6/20-7/21      6:00-8:00 p.m., Mon-Thurs      \$380 by 6/2      \$405 after 6/2      1 Sem credit

**Description:** This course provides an introduction to the concepts, solution techniques, and qualitative analysis of ordinary differential equations with applications. The topics are linear differential equations, first-order systems, linear systems, forcing and resonance, and Laplace transforms. The Zoom meetings will be highly interactive, and students are expected to participate in class discussions. The midterm and final will take place on campus.

**Prerequisites:** AP Calculus BC and Linear Algebra, or instructor approval

## STUDY SKILLS & TEST PREP

### #411-O, SAT PREP

6/20-7/6      10:00-12:00 p.m.      \$285 by 6/2      \$310 after 6/2      No credit

This course will help students prepare for math, verbal, and writing sections in small group instruction cohorts. The curriculum is based on the SAT test itself as well as the college-readiness skills it aims to assess. The course will include test-taking skills, strategies, and techniques as well as skill-building activities, tips, and tools. Students will be divided in two groups, focusing on either math or verbal then the other skill area. Students will spend 10 hours of preparation and practice in verbal (reading & writing analysis and skills) and another 10 hours in mathematics skills. Students will be combined in one larger group for the essay writing skill portion. During these last three days, students learn about essay writing skills specific to this test but which can be useful in any essay. Several practice exams are given, scored, and analyzed, including a full essay. This class is for sophomore grade level and higher. Families will need to purchase *College Board Official SAT Study Guide, 2020 Edition* by the first day of class.

## Asynchronous Courses

Courses listed in this section are self-paced courses completed online. Students are not required to attend class or to meet with a teacher in real time. Instead, they will submit work online and use online text and video resources. Students are able to interact with the instructor by email, by Canvas messaging, or via individually scheduled Zoom appointments. Students are required to take midterm and final exams on Jesuit's campus on Wednesday, July 5 and Friday, July 21, respectively. Please contact Mr. Jason Hildreth ([jhildreth@jesuitportland.org](mailto:jhildreth@jesuitportland.org)) for more information. For listings of Online and Jesuit Campus math courses, see the "Online Courses" and "Jesuit Campus Courses" sections.

## MATHEMATICS

### **#140-A, ACCELERATED GEOMETRY**

6/20-7/21      Asynchronous      \$940 by 6/2      \$965 after 6/2      Full-year credit

Accelerated Geometry is an honors course and is not intended for credit recovery. In addition to covering the geometry necessary for Precalculus, this self-paced class covers material from Algebra II/Trig.

**Prerequisite:** Strong knowledge of Algebra I

**Possible fall placement with department permission:** Honors Algebra 2/Trig or Honors Precalculus (students should discuss plans for advancement with their instructor before enrolling)

### **#148-A, ACCELERATED ALGEBRA II/TRIG**

6/20-7/21      Asynchronous      \$470 by 6/2      \$495 after 6/2      1 Sem Credit

**Prerequisites:** A strong understanding of Algebra 1 and completion of Geometry

**Possible fall placement with department permission:** Honors Precalculus (students should discuss plans for advancement with their instructor before enrolling)

### **#150-A, PRECALCULUS**

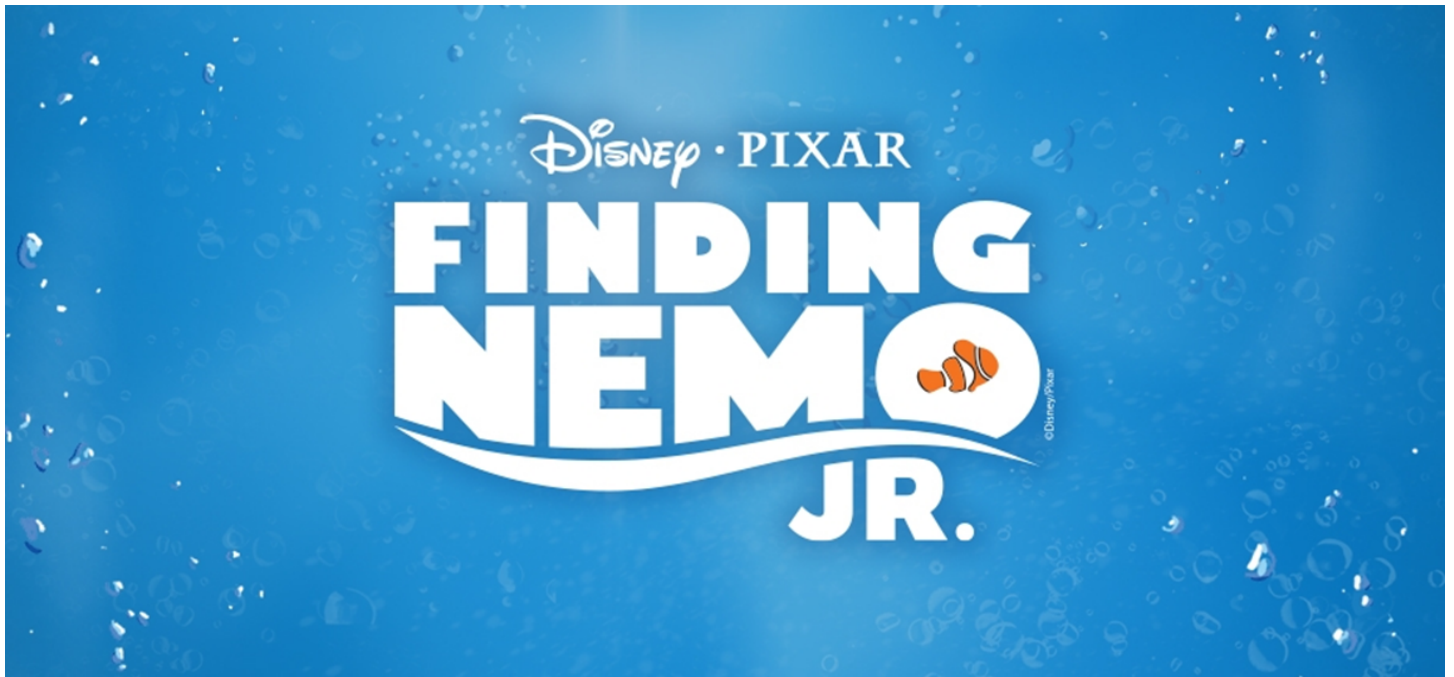
6/20-7/21      Asynchronous      \$470 by 6/2      \$495 after 6/2      1 Sem credit

Online Precalculus builds on the material covered in Algebra 2/Trigonometry and provides preparation for the study of calculus.

**Prerequisites:** Strong understanding of first-year algebra and geometry, as evidenced by one of the following:  
A grade of A- or better in Geometry Honors or Algebra II or a teacher recommendation

**Possible fall placement with department permission:** AP Calculus AB (students should discuss plans for advancement with their instructor before enrolling)

## **SUMMER THEATRE FOR ALL AGES!**



*For Students Completing Grades 1 – 8*

*Day Camp Dates: July 25<sup>th</sup> – August 4, 2023*

*Performances: August 5, 2023*

**Children's Chorus—Completing Grades 1-4 (2022-23 School Year), Course #910**

**Tuesday 7/25 – Thursday, 8/3, 9:30 am – 11:30 am (weekdays)**

**Combined Cast Dress Rehearsal, Friday 8/4, 12pm - 4pm**

**Performance Day, 8/5, Call time 12pm; Performances 2pm & 7pm**

**Cost \$240**

**Junior Ensemble—Completing Grades 5-8 (2022-23 School Year), Course #920**

**Tuesday 7/25 – Thursday 8/3, 12:30 - 4 pm (weekdays)**

**Combined Cast Dress Rehearsal, Friday 8/4, 12pm – 4pm**

**Performance Day, 8/5, Call time 12pm; Performances 2pm & 7pm**

**Cost \$395**

*Members of the Children's Chorus will appear onstage as ensemble members in the production of Finding Nemo. The Junior Ensemble will appear as the principal cast in the show.*

*Daytime classes will teach basic theatre skills, leading to their memorable participation in the final production.*

*Cast members must be available for ALL scheduled rehearsals and performances without exception.*

*\*Please note that eligibility for registration and participation in the Children's Chorus and Junior Ensemble is determined by the grade the student has completed at the end of the 2022-2023 school year.*

**Summer Tech Theatre Program-Grades 7-12, Course #930**  
**Tuesday 7/5 – Tuesday 7/18 Weekday Classes, 12-4 pm**  
**Wednesday – Thursday 7/19 - 20 Dress Rehearsal Days**  
**Thursday – Sunday 7/20 - 23 Performance Days**  
**Cost \$250**

*Work in a hands-on environment, with professional artists and technicians, to create the set, lighting, and sound design for the final production.*

*Participants become the technical staff and running crew for the Young People's Theatre Project Senior Camp performances of Les Misérables, July 20-23.*

*Tech Theatre students must be available to participate in rehearsals all day July 19-20, performances July 20-23, and the strike of the set on Sunday, July 23.*

*Tech Students will have many optional opportunities to work on the production outside of scheduled class times.*

*In addition, Tech students will have an opportunity to contribute to technical elements of the Day Camp production of Finding Nemo.*

## **THE YOUNG PEOPLE'S THEATRE PROJECT PERFORMING ARTS SENIOR OVERNIGHT CAMP**

Middle and High School students will form the Senior Ensemble (Principal Cast) of *Les Misérables*, rehearsing as part of The Young People's Theatre Project's unique overnight Performing Arts Camp at Camp Warm Beach along the Washington Coast. Admission to this program is by audition. Auditions take place in March and April.

For further information, email [camp@yptproject.org](mailto:camp@yptproject.org).

For more information about other summer opportunities with The Young People's Theatre Project,

visit [www.yptproject.org](http://www.yptproject.org).