York Catholic Mathematics Summer Work  
Due: Friday August 28, 2020

Students taking the courses listed below will be using the IXL website for their summer work. The goal is to provide students with feedback and instruction as they review previously studied concepts that are needed to successfully complete the upcoming course.

Successful completion of a lesson is defined by the percent listed next to the course. You do not need to score a 100 and finish the lesson but it is certainly encouraged. Lessons can be done in multiple sessions and your score will be saved each time you exit a lesson.

Teachers will have access to check your progress over the summer. You can email your math teacher with any questions you have on a particular lesson if you find yourself struggling. The program will provide you with solutions to questions you answer incorrectly. Review the solution carefully before moving on to the next question as that will help answer subsequent questions correctly. Students may complete additional lessons at any grade level and can be a benefit to help students fill in gaps on topics they did not master during the current school year.

Directions:
1. Log into IXL.com with your student Username and Password (email Mrs. Hanuska at ehanuska@yorkcatholic.org UN or PW)
2. Find the math class that you are going into for the 2020-2021 school year. Click on each link listed for that particular class and complete it to the score required for you to achieve. You should have between 9 to 23 lessons depending on your particular class.
3. You do not need to go in order. The program will save your current score each time you exit a lesson.

Algebra 1 Part 2 (10 lessons) - score 60 points or higher
- **A.1 Factors**  7K3
- **B.4 Compare and Order Integers**  T2M
- **C.8 Evaluating Numerical Expressions Involving Integers**  Y6W
- **D.1 Write Fractions in Lowest Terms**  ZGT
- **F.1 Understanding Exponents**  VFV
- **H.1 Understanding Ratios**  X45
- **N.1 Coordinate Plane Review**  T6E
- **V.1 Write Variable Linear Expressions**  PEZ
- **W.8 Solve two-step equations**  JXD
- **Y.1 Find the Slope of a Graph**  D7M
Algebra 2 (9 lessons) - score 60 points or higher

- B.1 Add, subtract, multiply and divide integers
- G.1 Coordinate plane review
- I.3 Simplify variable expressions using like terms and the distributive property
- J.4 Solve two-step linear equations
- S.1 Identify linear functions
- S.4 Find the slope from two points
- T.1 Does (x,y) satisfy the inequality
- V.1 Exponents with integer bases
- Z.4 Add and subtract polynomials

Algebra 2 CP (11 lessons) - score 80 points or higher

- G.1 Coordinate plane review
- I.3 Simplify variable expressions using like terms and the distributive property
- J.4 Solve two-step linear equations
- S.4 Find the slope from two points
- S.7 Slope intercept form: graph an equation
- U.1 Is (x,y) a solution to the system of equations?
- V.1 Exponents with integer bases
- Z.1 Polynomial Vocabulary
- Z.4 Add and subtract polynomials
- AA.2 Factor out a monomial
- AA.4 Factor quadratics with leading coefficient

Algebra 2 Honors (15 lessons) - score 85 points or higher

- B.7 Evaluate variable expressions involving rational numbers
- C.5 Solve proportions
- J.11 Solve linear equations: mixed review
- K.10 Solve advanced linear inequalities
- Q.9 Complete a function table from a graph
- S.4 Find the slope from two points
- S.24 Write equations for parallel or perpendicular lines
- U.8 Solve a system of equations by substitution
- V.9 Identify equivalent expressions involving exponents
- Z.1 Polynomial Vocabulary
- Z.8 Multiply two binomials
- AA.4 Factor quadratics with leading coefficient
- BB.1 Characteristics of quadratic equations
- BB.13 Match quadratic functions and graphs
- EE.1 Simplify radical expressions
Geometry (9 lessons) - score 60 points or higher

- B.1 Add, subtract, multiply and divide integers
- G.1 Coordinate plane review
- I.3 Simplify variable expressions using like terms and the distributive property
- J.4 Solve two-step linear equations
- S.1 Identify linear functions
- S.4 Find the slope from two points
- T.1 Does $(x,y)$ satisfy the inequality?
- V.1 Exponents with integer bases
- Z.4 Add and subtract polynomials

Geometry CP (9 lessons) - score 80 points or higher

- A.1 Ratios and Proportions
- A.3 Properties of Exponents
- A.4 Simplify Radical Expressions
- A.5 Write Variable Expressions
- A.6 Solve Linear Equations
- A.7 Solve Linear Inequalities
- A.8 Solve Systems of Linear Equations
- A.9 Solve Quadratic Equations by Factoring
- A.10 Solve Quadratic Equations Using the Quadratic Formula

Geometry Honors (15 lessons) - score 85 points or higher

- A.1 Ratios and Proportions
- A.3 Properties of Exponents
- A.4 Simplify Radical Expressions
- A.5 Write Variable Expressions
- A.6 Solve Linear Equations
- A.7 Solve Linear Inequalities
- A.8 Solve Systems of Linear Equations
- A.9 Solve Quadratic Equations by Factoring
- A.10 Solve Quadratic Equations Using the Quadratic Formula
- B.6 Solve multivariable equations
- D.1 Domain and Range
- H.4 Multiply complex numbers
- J.13 Match quadratic functions and graphs
- M.5 Simplify expressions involving rational exponents
- N.2 Evaluate rational expressions
Algebra 3 / Trig level 2 (11 lessons) - score 60 points or higher

- **A.3** Simplify variable expressions using properties PVC
- **B.1** Solve linear equations SNN
- **D.6** Find the slope of a linear function W67
- **E.1** Is (x,y) a solution to a system of equations? NJP
- **E.6** Solve a system of equations using substitution BW5
- **H.1** Introduction to complex numbers SVV
- **I.3** Factoring quadratics UB5
- **J.13** Match quadratic functions and their graphs QCE
- **K.1** Polynomial Vocabulary DYB
- **K.3** Multiply Polynomials 8GN
- **O.4** Composition of linear functions: find a value MFV

Algebra 3 / Trig CP (11 lessons) - score 80 points or higher

- **A.3** Simplify variable expressions using properties PVC
- **B.1** Solve linear equations SNN
- **D.6** Find the slope of a linear function W67
- **E.1** Is (x,y) a solution to a system of equations? NJP
- **E.6** Solve a system of equations using substitution BW5
- **H.1** Introduction to complex numbers SVV
- **I.3** Factoring quadratics UB5
- **J.13** Match quadratic functions and their graphs QCE
- **K.1** Polynomial Vocabulary DYB
- **K.3** Multiply Polynomials 8GN
- **O.4** Composition of linear functions: find a value MFV
Pre-Calculus CP  (14 lessons)- score 80 points or higher

- D.12 Domain and range of absolute value functions: graphs Y8C
- M.1 Evaluate rational exponents KJX
- K.2 Add and subtract polynomials 9A3
- K.3 Multiply polynomials 8GN
- N.6 Add and subtract rational expressions FEX
- A.3 Properties of exponents LNK
- A.4 Simplify radical expressions SC5
- A.8 Solve systems of linear equations 76G
- A.9 Solve a quadratic equation by factoring ENU
- A.10 Solve a quadratic equation using the quadratic formula WGU
- B.7 Midpoint formula: find the midpoint 2YG
- B.9 Distance formula 59F
- O.5 Composition of linear functions: find an equation RSP
- Q.7 Solve variation equations JZ9

Pre-Calculus Honors  (18 lessons)- score 80 points or higher

- D.12 Domain and range of absolute value functions: graphs Y8C
- M.1 Evaluate rational exponents KJX
- K.2 Add and subtract polynomials 9A3
- K.3 Multiply polynomials 8GN
- N.6 Add and subtract rational expressions FEX
- A.3 Properties of exponents LNK
- A.4 Simplify radical expressions SC5
- A.8 Solve systems of linear equations 76G
- A.9 Solve a quadratic equation by factoring ENU
- A.10 Solve a quadratic equation using the quadratic formula WGU
- B.7 Midpoint formula: find the midpoint 2YG
- B.9 Distance formula 59F
- H.6 Add, subtract, multiply, and divide complex numbers CEN
- I.6 Factor sums and differences of cubes NJV
- O.5 Composition of linear functions: find an equation RSP
- Q.7 Solve variation equations JZ9
- U.2 Find the radius or diameter of a circle 5Q2
- U.3 Write equations of circles in standard form from graphs ZLA
Calculus Honors  (13 lessons)- score 80 points or higher

- A.3 Composition of functions Y8M
- A.10 Average rate of change 5TE
- B.6 Describe function transformations NZ2
- C.6 Finding trigonometric ratios using reference angles RAF
- C.7 Inverses of trigonometric functions LHP
- C.8 Solve a quadratic equation using the quadratic formula FYM
- C.16 Graph sine and cosine functions VRS
- F.9 Evaluate logarithms using properties XWK
- F.10 Solve exponential equations using logarithms UWM
- F.12 Solve logarithmic equations with multiple logarithms 9CY
- F.16 Exponential growth and decay: word problems 7SH
- M.9 Solve Trigonometric equations DVX
- M.10 Trigonometric ratios: find a side length 62D

AP Calculus - Score a 90 or higher

Part 1 Due July 20th

- A.3 Composition of functions Y8M
- B.6 Describe function transformations NZ2
- C.6 Finding trigonometric ratios using reference angles RAF
- C.7 Inverses of trigonometric functions LHP
- C.16 Graph sine and cosine functions VRS
- F.9 Evaluate logarithms using properties XWK
- F.10 Solve exponential equations using logarithms UWM
- F.12 Solve logarithmic equations with multiple logarithms 9CY
- F.16 Exponential growth and decay: word problems 7SH
- M.9 Solve Trigonometric equations DVX

Part 2 Due August 25th

- E.1 Find limits using graphs BF5
- E.2 Find one-sided limits using graphs L7Q
- E.3 Determine if a limit exists 9YS
- F.4 Find limits using limit laws W8J
- F.5 Find limits of polynomials and rational functions 9BY
- F.6 Finding limits using rationalization and factorization GXB
- G.1 Finding limits at vertical asymptotes using graphs VZP
- G.3 Determine end behavior of polynomials and rational functions GVF
- H.2 Find the limit at a vertical asymptote of a rational function II 8QE
- I.5 Determine continuity on an interval using graphs E6M
- I.6 Determine the continuity of a piecewise function at a point X5C
- I.7 Make a piecewise function continuous VKT
- I.8 Intermediate Value Theorem BDH