

Berlin Brothersvalley School District
High School
Year at a Glance Curriculum

Math
Algebra II
10th

Course Description: This course emphasizes variation equations, functions, graphs, quadratic equations, matrices, systems, powers and roots. Students will study each concept in depth through applications and practical problems, providing opportunities to develop skills and to understand the importance of mathematics in everyday life.

Please see below for a concise outline of the course.

Units of Study	Concepts	Time	Standards
Functions Notations Graphs	Students will know... <ul style="list-style-type: none"> • Function notation • Order of Operations • How data relates to graphs • Formulas 	4.5 weeks	CC.2.2.HS.D.2 CC.2.2.HS.D.9
Direct Variation Inverse Variation	Students will know... <ul style="list-style-type: none"> • Direct and inverse variations • Graphs of variation equations • How to model data 	4.5 weeks	CC.2.2.HS.C.1 CC.2.2.HS.C.2 CC.2.1.HS.F.1 CC.2.1.HS.F.2
Linear Functions and Graphs	Students will know... <ul style="list-style-type: none"> • Graphs of linear functions • Equations of lines • Best fit lines • Formulas for sequences 	6 weeks	CC.2.2.HS.C.2 CC.2.2.HS.C.3 CC.2.2.HS.C.5 CC.2.4.HS.B.3
Matrices and Properties	Students will know... <ul style="list-style-type: none"> • Matrices and their applications 	3 weeks	CC.2.2.HS.D.7

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Systems	Students will know... <ul style="list-style-type: none"> • Graphs of systems • Substitution method • Elimination method • Inverses of Matrices • Linear Programing • Graphs of Systems of Linear Inequalities 	7 weeks	CC.2.2.HS.C.3 CC.2.2.HS.D.7 CC.2.2.HS.D.10
Quadratics	Students will know... <ul style="list-style-type: none"> • Quadratics • Graph Translation Theorem • Quadratic Equations • Complex and imaginary numbers 	6 weeks	CC.2.2.HS.D.3 CC.2.2.HS.D.4
Exponents	Students will know... <ul style="list-style-type: none"> • Properties of Powers • Interest Formula 	5 weeks	CC.2.1.HS.F.1

*Please visit pdesas.org for a complete list of standards taught in this course and for more information regarding PA State Standards for this course.