



Monday
01/18/2021

Tuesday
01/19/2021

Wednesday
01/20/2021

Algebra 2 (1A) 7:57am - 8:52am

Multiplying Matrices

Objectives:

- Students will understand the properties of matrices with respect to multiplication.
- Students will understand how to multiply two matrices.

Key Concepts:

- Matrix Product
- Multiplying Matrices
- Square Matrix
- Diagonal
- Multiplicative identity matrix

Examples from 4-2 Powerpoint

Homework

4-2 Powerpoint or pg.257-260/19,20,25-29, 31-35, 41, 54-56, 68-70

Notes

4-2 Powerpoint

Standards

- MA.HS.N-VM.A** Vector & Matrix Quantities: Represent and model with vector quantities.
- MA.HS.N-VM.C.4** (+) Understand that, unlike the multiplication of numbers, matrix multiplication for square matrices is not a commutative operation, but still satisfies the associative and distributive properties. (CCSS: HS.N-VM.C.9)
- MA.HS.N-VM.C.6** (+) Multiply a vector (regarded as a matrix with one column) by a matrix of suitable dimension to produce another vector. Work with matrices as transformations of vectors. (CCSS: HS.N-VM.C.11)

Foundation Math (1B) 8:55am - 9:50am

Algebra 2 (1A) 7:57am - 9:49am

Transforming Matrices

Bellwork from prior lesson over multiplying matrices

Objectives:

- Students will use matrices to transform a plane figure.

Key Concepts:

- Translation Matrix
- Reflection Matrix
- Rotation Matrix

Examples from 4-3 Powerpoint

Homework

Transformation matrix handout or p. 265-267/10-14, 18-22, 27-29, 36-38

Notes

4-3 Powerpoint

Standards

- MA.HS.A-REI.C.3.CES** Use a matrix to model a system of equations, which may itself be a model of a real-world situation. (MP4)
- MA.HS.N-VM.C.5** (+) Understand that the zero and identity matrices play a role in matrix addition and multiplication similar to the role of 0 and 1 in the real numbers. The determinant of a square matrix is nonzero if and only if the matrix has a multiplicative inverse. (CCSS: HS.N-VM.C.10)

Advisory 9:54am - 10:24am

Geometry (2A) 10:29am - 12:20pm

Isosceles and Equilateral Triangles

Assignment Due: 4-5 Assignment

Foundation Math (1B) 7:57am - 9:49am

Volume of Pyramids and Cones

Objectives: Students will find the volumes of pyramids and cones.

Key Concepts:

- Volume of a Pyramid
- Volume of a Cone

Examples 1-3 on 4-8 Powerpoint

Homework

p.176-177/12-15, 24-26, 40, 41-46

Notes

4-8 Powerpoint

Standards

- MA.HS.G-GMD.A.2.CES** Apply volume formulas for cylinders, pyramids, cones, and spheres to real-world contexts to solve problems. (MP4)

Advisory 9:54am - 10:24am

Geometry (2B) 10:29am - 12:20pm

Isosceles and Equilateral Triangles

Assignment Due: 4-5 Assignment

Lesson Objectives:

- Students will use properties of isosceles triangles.
- Students will use properties of equilateral triangles.

Key Concepts:

- Legs of an isosceles triangles
- Vertex angle
- Base angles



Volumes of Prisms and Cylinders

Assignment Due: 4-5 Assignment

Lesson Objectives:
- Students will find the volumes of prisms and cylinders.

Key Concepts:
- Volume of a prism
- Volume of a cylinder

Examples 1-3 from 4-7 Powerpoint

Homework
p.186-187/11-13,15-17,37-39,41-45

Notes
4-7 Powerpoint

Standards
MA.HS.G-GMD.A.3 Use volume formulas for cylinders, pyramids, cones, and spheres to solve problems. (CCSS: HS.G-GMD.A.3)

Advisory 9:53am - 10:23am

Geometry (2A) 10:26am - 11:21am

Proving Right Triangles Congruent

Assignment Due: 4-4 Assignment

Lesson Objectives:
- Students will use the right triangle congruence theorems to prove relationships in geometric figures.

Key Concepts:
- Right Triangle Congruence

Examples 1-3 from 4-5 Powerpoint

Homework
p.322/5-14

Lesson Objectives:
- Students will use properties of isosceles triangles.
- Students will use properties of equilateral triangles.

Key Concepts:
- Legs of an isosceles triangles
- Vertex angle
- Base angles
- Isosceles Triangle
- Properties of equilateral triangle

Examples 1-4 from 4-6 Powerpoint

Homework

p.329-330/9-13,15-20,24

Notes

4-6 Powerpoint

Standards

MA.HS.G-CO.C.2 Prove theorems about triangles. *Theorems include: measures of interior angles of a triangle sum to 180° ; base angles of isosceles triangles are congruent; the segment joining midpoints of two sides of a triangle is parallel to the third side and half the length; the medians of a triangle meet at a point.* (CCSS: HS.G-CO.C.10)

Physics (3A) 1:05pm - 3:00pm

Circular Motion Test

Circular Motion Test

Algebra 2 (7th Period) 3:05pm - 4:03pm

Matrix Inverses and Solving Systems

Assignment Due: 4-4 Assignment

Lesson Objectives:
- Students will determine whether a matrix has an inverse.

- Isosceles Triangle
- Properties of equilateral triangle

Examples 1-4 from 4-6 Powerpoint

Homework

p.329-330/9-13,15-20,24

Notes

4-6 Powerpoint

Standards

MA.HS.G-CO.C.2 Prove theorems about triangles. *Theorems include: measures of interior angles of a triangle sum to 180° ; base angles of isosceles triangles are congruent; the segment joining midpoints of two sides of a triangle is parallel to the third side and half the length; the medians of a triangle meet at a point.* (CCSS: HS.G-CO.C.10)

Planning Period 1:05pm - 3:00pm

Algebra 2 (7th Period) 3:05pm - 4:03pm

Row Operations and Augmented Matrices

Assignment Due: 4-5 Assignment

Lesson Objectives:
- Students will use elementary row operations to solve systems of equations.

Key Concepts:
- Augmented matrix
- Row operation
- Row reduction
- Reduce row-echelon form

Examples 1-3 from 4-6 Powerpoint

Homework
4-6 Handout

Notes
4-6 Powerpoint



Notes
4-5 Powerpoint

Standards
MA.HS.G-CO.C.2 Prove theorems about triangles. *Theorems include: measures of interior angles of a triangle sum to 180° ; base angles of isosceles triangles are congruent; the segment joining midpoints of two sides of a triangle is parallel to the third side and half the length; the medians of a triangle meet at a point.* (CCSS: HS.G-CO.C.10)

Geometry (2B) 11:24am - 12:20pm

Proving Right Triangles Congruent

Assignment Due: 4-4 Assignment

Lesson Objectives:
- Students will use the right triangle congruence theorems to prove relationships in geometric figures.

Key Concepts:
- Right Triangle Congruence

Examples 1-3 from 4-5 Powerpoint

Homework
p.322/5-14

Notes
4-5 Powerpoint

Standards
MA.HS.G-CO.C.2 Prove theorems about triangles. *Theorems include: measures of interior angles of a triangle sum to 180° ; base angles of isosceles triangles are congruent; the segment joining midpoints of two sides of a triangle is parallel to the third side and half the length; the medians of a triangle meet at a point.* (CCSS: HS.G-CO.C.10)

Physics (3A) 1:05pm - 2:02pm

- Students will solve systems of equations using inverse matrices.

Key Concepts:
- Multiplicative inverse matrix
- Inverse of a 2x2 matrix
- Matrix equation
- Variable matrix
- Constant matrix

Examples 1-3 from 4-5 Powerpoint

Homework
p.282-285/14,15,20,21,22-24,27,40-43,52-54

Notes
4-5 Powerpoint

Standards
MA.HS.A-REI.C.5 (+) Find the inverse of a matrix if it exists and use it to solve systems of linear equations (using technology for matrices of dimension 3×3 or greater). (CCSS: HS.A-REI.C.9)

Standards

MA.HS.N-VM.C Vector & Matrix Quantities: Perform operations on matrices and use matrices in applications.

MA.HS.A-REI.C.4 (+) Represent a system of linear equations as a single matrix equation in a vector variable. (CCSS: HS.A-REI.C.8)

MA.HS.A-REI.C.3.CES Use a matrix to model a system of equations, which may itself be a model of a real-world situation. (MP4)



Circular Motion Review

Circular Motion Review

Planning Period 2:05pm - 3:02pm

Algebra 2 (7th Period) 3:05pm - 4:03pm

Determinants and Cramer's Rule

Assignment Due: 4-3 Powerpoint

Lesson Objectives:

- Students will find the determinant of 2×2 and 3×3 matrices.
- Students will use Cramer's Rule to solve systems of linear equations.

Key Concepts:

- Determinant
- Coefficient matrix
- Cramer's Rule
- Solutions of systems
- Determinant of 3×3 matrix
- Cramer's Rule for three equations

Homework

p.275-277/18-20,23,26,27,30,31,37,38,48-51

Notes

4-4 Powerpoint

Standards

MA.HS.N-VM.C.7 (+) Work with 2×2 matrices as transformations of the plane and interpret the absolute value of the determinant in terms of area. (CCSS: HS.N-VM.C.12)

MA.HS.N-VM.C Vector & Matrix Quantities: Perform operations on matrices and use matrices in applications.



Thursday
01/21/2021

Friday
01/22/2021

Teacher
Notes

Algebra 2 (1A) 7:57am - 8:52am

Determinants and Cramer's Rule

Assignment Due: 4-3 Powerpoint

Lesson Objectives:

- Students will find the determinant of 2x2 and 3x3 matrices.
- Students will use Cramer's Rule to solve systems of linear equations.

Key Concepts:

- Determinant
- Coefficient matrix
- Cramer's Rule
- Solutions of systems
- Determinant of 3x3 matrix
- Cramer's Rule for three equations

Homework

p.275-277/18-20,23,26,27,30,31,37,38,48-51

Notes

4-4 Powerpoint

Standards

MA.HS.N-VM.C.7 (+) Work with 2×2 matrices as transformations of the plane and interpret the absolute value of the determinant in terms of area. (CCSS: HS.N-VM.C.12)

MA.HS.N-VM.C Vector & Matrix Quantities: Perform operations on matrices and use matrices in applications.

Foundation Math (1B) 8:55am - 9:50am

Surface Area of Prisms and Cylinders

Assignment Due: 4-8 Powerpoint

Lesson Objectives:



- Students will find the surface area of prisms and cylinders.

Key Concepts:

- Surface Area
- Surface Area of a Prism
- Surface Area of a Cylinder

Examples 1-2 from 4-9 Powerpoint

Homework

p.196-197/10-15,26,31-42

Notes

4-9 Powerpoint

Standards

MA.HS.G-GMD.A.3 Use volume formulas for cylinders, pyramids, cones, and spheres to solve problems. (CCSS: HS.G-GMD.A.3)

Advisory 9:53am - 10:23am

Geometry (2A) 10:26am - 11:21am

Triangles and Coordinate Proof

Assignment Due: 4-6 Assignment

Lesson Objectives:

- Students will position and label triangles for use in coordinate proofs.
- Students will write coordinate proofs.

Key Concepts:

- Coordinate proofs
- Placing Triangles on Coordinate Plane

Examples 1-4 on 4-7 Powerpoint

Homework

p.337-338/9-11,13-16,19,21,22



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| Notes 4-7 Powerpoint |
| Standards MA.HS.G-GPE.B.1.CES Connect coordinate proof to geometric theorems and the coordinate plane. (MP2) |

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| Geometry (2B) 11:24am - 12:20pm |
| Triangles and Coordinate Proof |
| Assignment Due: 4-6 Assignment |
| Lesson Objectives: <ul style="list-style-type: none">- Students will position and label triangles for use in coordinate proofs.- Students will write coordinate proofs. |
| Key Concepts: <ul style="list-style-type: none">- Coordinate proofs- Placing Triangles on Coordinate Plane |
| Examples 1-4 on 4-7 Powerpoint |
| Homework p.337-338/9-11,13-16,19,21,22 |
| Notes 4-7 Powerpoint |
| Standards MA.HS.G-GPE.B.1.CES Connect coordinate proof to geometric theorems and the coordinate plane. (MP2) |

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| Physics (3A) 1:05pm - 2:02pm |
| Fluids (Part 1) |
| Lesson Objectives: <ul style="list-style-type: none">- Students will look at phases of matter- Students will solve problems involving density and gravity.- Students will be introduced to pressure in fluids |



Key Concepts:

- Phases of matter (Solid, Liquid, Gas)
- Fluids
- Plasma
- Liquid crystals
- Density
- Specific gravity
- Pressure
- Pascal

Example 1 from Density and Specific Gravity

Examples 1-2 from Pressure in Fluids

Homework

p.281/1-4,7-9

Notes

Fluids (Part 1) Powerpoint

Standards

SC.HS.3.4.c Develop a model based on evidence of Earth's interior to describe the cycling of matter by thermal convection. (HS-ESS2-3) *(Clarification Statement: Emphasis is on both a one-dimensional model of Earth, with radial layers determined by density, and a three-dimensional model, which is controlled by mantle convection and the resulting plate tectonics. Examples of evidence include maps of Earth's three-dimensional structure obtained from seismic waves, records of the rate of change of Earth's magnetic field [as constraints on convection in the outer core], and identification of the composition of Earth's layers from high-pressure laboratory experiments.)*

Planning Period 2:05pm - 3:02pm

Algebra 2 (7th Period) 3:05pm - 4:03pm

Chapter 4 Review

Chapter 4 Review