CCSS	PA Core Standard
CC.2.1.7.D.1	**Unit 1 -Ratios, Proportions, and Proportional** Analyze proportional relationships and use them to model
CC.2.1.7.E.1	**Unit 2- Understanding Positive and Negative Rational** Apply and extend previous understandings of operations
CC.2.2.7.B.1	**Unit 3 – Solving Equations** Apply properties of operations to generate equivalent expressions.
CC.2.2.7.B.3	**Unit 4 – Solving Equations and Inequalities in Real World Contexts** Model and solve real-world and mathematical problems by using and connecting numerical, algebraic, and/or graphical representations.

CC.2.3.7.A.2 **Unit 5 – Geometric Figures**

Visualize and represent geometric figures and describe the relationships between them.

CC.2.3.7.A.1 **Unit 6 – Using Properties and Formulas with Geometric Figures**

Solve real-world and mathematical problems involving angle measure, area, surface area, circumference, and volume.

CC.2.4.7.B.1 **Unit 7 – Sampling, Inferences and Comparing Populations**

Draw inferences about populations based on random sampling concepts and informal inferences about two populations.

CC.2.4.7.B.3 **Unit 8 – Probability of Simple and Compound Events**

Investigate chance and processes and develop, use, and evaluate probability models.

PA Eligible Content Numbers	Eligible Content
M07.A-R.1.1.1	Compute unit rates associated with ratios of fractions, including
M07.A-R.1.1.2	Determine whether two quantities are proportionally related (e.g.,
M07.A-R.1.1.3	Identify the constant of proportionality (unit rate) in tables, graphs,
M07.A-R.1.1.4	Represent proportional relationships by equations.
M07.A-R.1.1.5	Explain what a point (x, y) on the graph of a proportional
M07.A-R.1.1.6	Use proportional relationships to solve multi-step ratio and percent
	•Solve problems involving scale drawings of geometric figures,
M07.A-N.1.1.2	Represent addition and subtraction on a horizontal or vertical Additive Inverses - Describe situations in which opposite quantities Absolute value – Understand p + q as the number located a
M07.A-N.1.1.1	Apply properties of operations to add and subtract rational Understand subtraction of rational numbers as adding the additive
M07.A-N.1.1.3	Apply properties of operations to multiply and divide rational Understand that multiplication is extended from fractions to Understand that integers can be divided, provided that the divisor
M07.A-N.1.1.3	Apply properties of operations as strategies to add, subtract,
M07.B-E.1.1.1	Divisibility Rules
	Apply properties of operations to add, subtract, factor, and expand linear expressions with rational coefficients. Understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related.
M07.B-E.2.1.1	Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate. Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems.
M07.B-E.2.2.1	Solve word problems leading to equations of the form px + q = r and p(x + q) = r, where p, q, and r are specific rational numbers.
M07.B-E.2.2.2	Solve word problems leading to inequalities of the form px + q > r or px + q < r, where p, q, and r are specific rational numbers, and graph the solution set of the inequality.

M07.B-E.2.3.1	Determine the reasonableness of an answer(s), or interpret the solution(s) in the context of the problem.
M07.C-G.1.1.1	Solve problems involving scale drawings of geometric figures, including finding length and area.
M07.C-G.1.1.2	Identify or describe the properties of all types of triangles based on angle and side measure.
M07.C-G.1.1.3	Use and apply the triangle inequality theorem.
M07.C-G.1.1.4	Describe the two-dimensional figures that result from slicing three-dimensional figures.
M07.C-G.2.1.1	Identify and use properties of supplementary, complementary, and adjacent angles in a multistep problem to write and solve simple equations for an unknown angle in a figure.
M07.C-G.2.1.2	Identify and use properties of angles formed when two parallel lines are cut by a transversal (e.g., angles may include alternate interior, alternate exterior, vertical, corresponding).
M07.C-G2.2.1	Find the area and circumference of a circle. Solve problems involving area and circumference of a circle.
M07.C-G.2.2.2	Solve real-world and mathematical problems involving area, volume, and surface area of two and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.
M07.D-S.1.1.1	Determine whether a sample is a random sample given a real-world situation.
M07.D-S.1.1.2	Use data from a random sample to draw inferences about a population with an unknown characteristic of interest.
M07.D-S.2.1.1	Compare two numerical data distributions using measures of center and variability.
M07.D-S.3.1.1	Predict or determine whether some outcomes are certain, more likely, less likely, equally likely, or impossible.
M07.D-S.3.2.1	Determine the probability of a chance event by collecting data on the chance process that it and observing its long-run relative frequency. Predict the approximate relative frequency given the probability.

M07.D-S.3.2.2	Find the probability of a simple event, including the probability of a simple event not occurring.
M07.D-S.3.2.3	Find probabilities of independent compound events using organized lists, tables, tree diagrams, and simulation.
M07.D-S.3.2.3	Understand that, just as with simple events, the probability of a compound event is the fraction of outcomes in the sample space for which the compound event occurs.
M07.D-S.3.2.3	Represent sample spaces for compound events using methods such as organized lists, tables and tree diagrams. For an event described in everyday language (e.g., “rolling double sixes”), identify the outcomes in the sample space which compose the event.
M07.D-S.3.2.3	Design and use a simulation to generate frequencies for compound events.
M07.D-S.3.2.3	Develop a probability model and use it to find probabilities of events. Compare probabilities from a model to observed frequencies; if the agreement is not good, explain possible sources of the discrepancy.
M07.D-S.3.2.3	Develop a uniform probability model by assigning equal probability to all outcomes, and use the model to determine probabilities of events. For example, if a student is selected at random from a class, find the probability that Jane will be selected and the probability that a girl will be selected.
M07.D-S.3.2.3	Develop a probability model(which may not be uniform) by observing frequencies in data generated from a chance process. For example, find the approximate probability that a spinning penny will land heads up or that a tossed paper cup will land open-end down. Do the outcomes for the spinning penny appear to be equally likely based on the observed frequencies?

Goals

At the end of this module, students will be able to independently use
Compute unit rates associated with ratios of fractions.
Recognize and represent proportional relationships between quantities.
Use proportional relationships to solve multistep ratio and percent

At the end of this module, students will be able to independently use
Solve real-world and mathematical problems involving the four operations

At the end of this module, students will be able to independently use their learning to:

Use the order of operations when simplifying expressions and connect prior knowledge of the distributive property with expressions and equations.

At the end of this module, students will be able to independently use their learning to:
Model and solve real world and mathematical problems using multiple representations such as algebraic, graphical and using tables.

Solve multi-step equations or inequalities with one variable.

Solve and interpret multi-step real life and mathematical problems posed with positive and negative rational numbers.

At the end of this module, students will be able to independently use their learning to:

Solve problems involving scale drawings of geometric figures.
Apply the properties of all types of triangles based on angle and side measure including the triangle inequality theorem.
Describe the two-dimensional figures that result from slicing three-dimensional figures.

At the end of this module, students will be able to independently use their learning to:

Use properties of angle types and properties of angles formed when two parallel lines are cut by a transversal line to solve problems.

Solve problems involving area and circumference of a circle(s).

Solve mathematical problems involving area, volume and surface area of two- and three-dimensional objects.

At the end of this module, students will be able to independently use their learning to:
Draw inferences about two populations based on random sampling concepts.
Draw informal comparative inferences about two populations using measures of center and measures of variability.

At the end of this module, students will be able to independently use their learning to:

Determine and approximate relative frequencies and probabilities of events.

Find probabilities of independent compound events.

Predict the approximate relative frequency given the probability.

Find the probability of a simple event, including the probability of a simple event not occurring.