

Topic 1 : Integers & Rational Numbers

Standard : 7.NS.A - Apply and extend previous understandings of operations with fractions.

I can...

- Relate integers, their opposites, and their absolute values and apply this understanding to number lines
- Recognize rational numbers and write them in decimal form as either terminating or repeating decimals
- Add, subtract, multiply, and divide integers
- Add, subtract, multiply, and divide rational numbers
- Model rational number operations using a model such as a number line
- Decide which operations to use to solve problems with rational numbers
- Apply operations with rational numbers to real-world contexts
- Make sense of numbers and words in the problem before solving

Topic 2 : Analyze and Use Proportional Relationships

Standard : 7.RP.A - Analyze proportional relationships and use them to solve real-world and mathematical problems.

I can...

- use ratio concepts and reasoning to solve multi-step problems
- find unit rates with ratios of fractions and use them to solve problems
- test for equivalent ratios to decide whether quantities are in a proportional relationship
- use the constant of proportionality in an equation to represent a proportional relationship
- use a graph to determine whether two quantities are proportional
- determine whether a relationship is proportional and use representation to solve problems

Topic 3 : Analyze and Solve Percent Problems

Standard : 7.RP.A - Analyze proportional relationships and use them to solve real-world and mathematical problems.

I can...

- understand, find, and analyze percents of a number.
- use proportions to solve problems.
- represent and solve percent problems using equations.
- solve problems involving percent change and percent error.
- solve problems involving percent markup and markdown.
- apply percent reasoning to solve simple interest problems.
- make sense of numbers and words in the problem before solving

Topic 4 : Generate Equivalent Expressions

Standard :

7.EE.A - Use properties of operations to generate equivalent expressions.

7.EE.B - Solve real-life and mathematical problems using numerical and algebraic expressions and equations.

I can...

- write and evaluate algebraic expressions
- write equivalent expressions for given expressions
- use properties of operations to simplify expressions
- expand expressions using the Distributive Property
- factor expressions
- add and subtract expressions that represent real-world problems
- use an equivalent expression to find new information

Topic 5 : Solve Problems Using Equations & Inequalities

Standard : 7.EE.B - Solve real-life and mathematical problems using numerical and algebraic expressions and equations.

I can...

- represent a problem with a two-step equations.
- solve a problem with a two-step equations.
- use the Distributive Property to solve equations.
- solve inequalities using addition or subtraction.
- solve inequalities using multiplication or division.
- write and solve two-step inequalities.
- solve inequalities that require multiple steps.

Topic 6 : Use Sampling to Draw Inferences About Populations

Standard : 7.SP.A - Use random samplings to draw inferences about a population

7.SP.B - Draw informal comparative inferences about two populations.

I can...

- determine if a sample is representative of a population.
- make inferences about a population from a sample data set.
- draw comparative inferences about two populations using median and interquartile range (IQR)
- compare populations using the mean, median, mode, range, interquartile range, and mean absolute deviation.

Topic 7 : Probability

Standard : 7.SP.C - Investigate chance processes and develop, use, and evaluate probability models.

I can...

- describe the likelihood that an event will occur.
- determine the theoretical probability of an event.
- determine the experimental probability of an event.
- use probability models to find the probabilities of events.
- find all possible outcomes of a compound event.
- find the probability of a compound event.
- simulate a compound event to approximate its probability.

Topic 8 : Solve Problems Involving Geometry

Standard :

7.G.A - Draw, construct, and describe geometrical figures and describe the relationships between them.

7.G.B - Solve real-life and mathematical problems involving angle measures, area, surface area, and volume.

I can...

- use the key in a scale drawing to find missing measures
- draw figures with given conditions
- draw triangles when given information about their side lengths and angle measures
- solve problems involving angle relationships
- solve problems involving radius, diameter, and circumference of circles
- solve problems involving the area of a circle
- determine what the cross section looks like when a 3D figure is sliced
- find the area and surface area of 2-dimensional prisms
- use the area of the base of a three-dimensional figure to find its volume