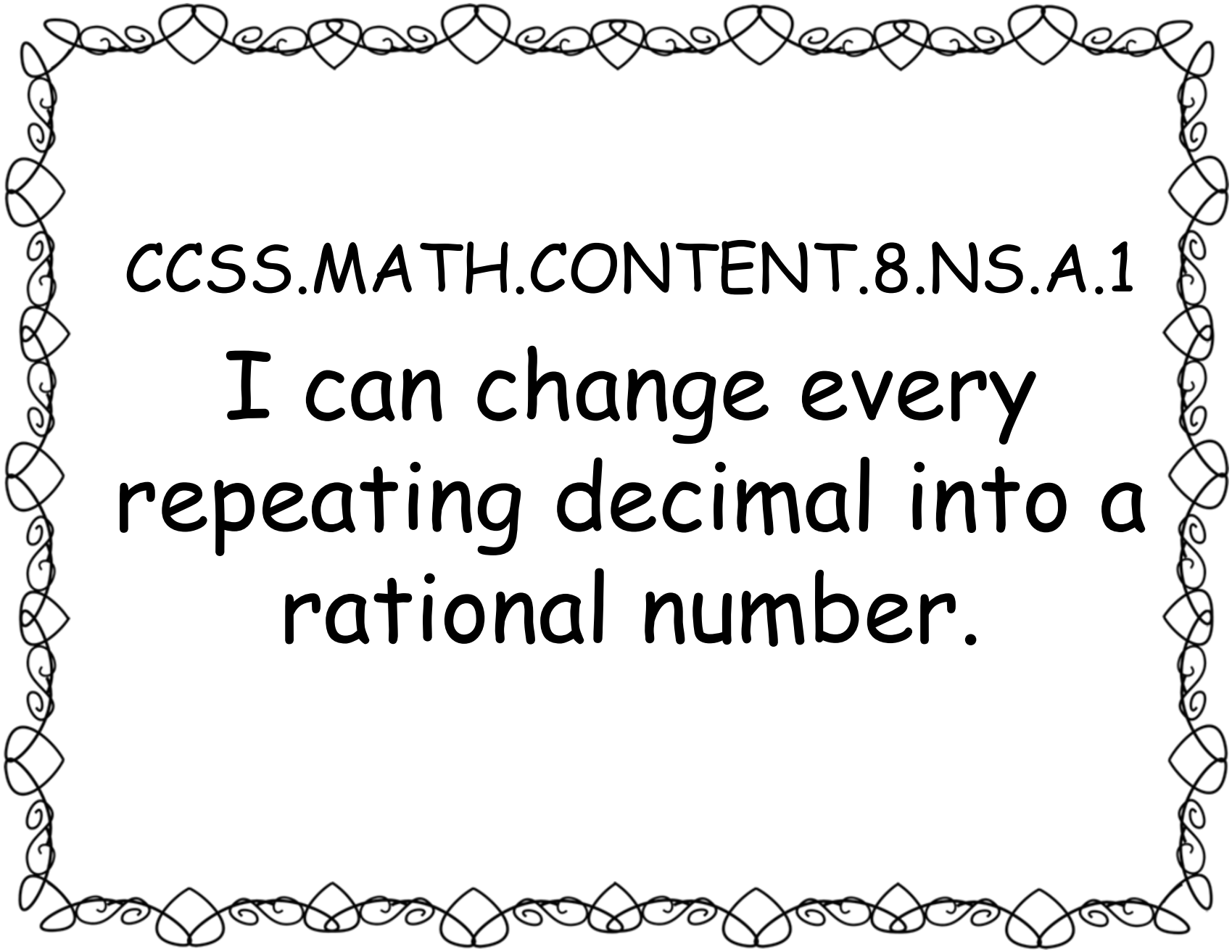
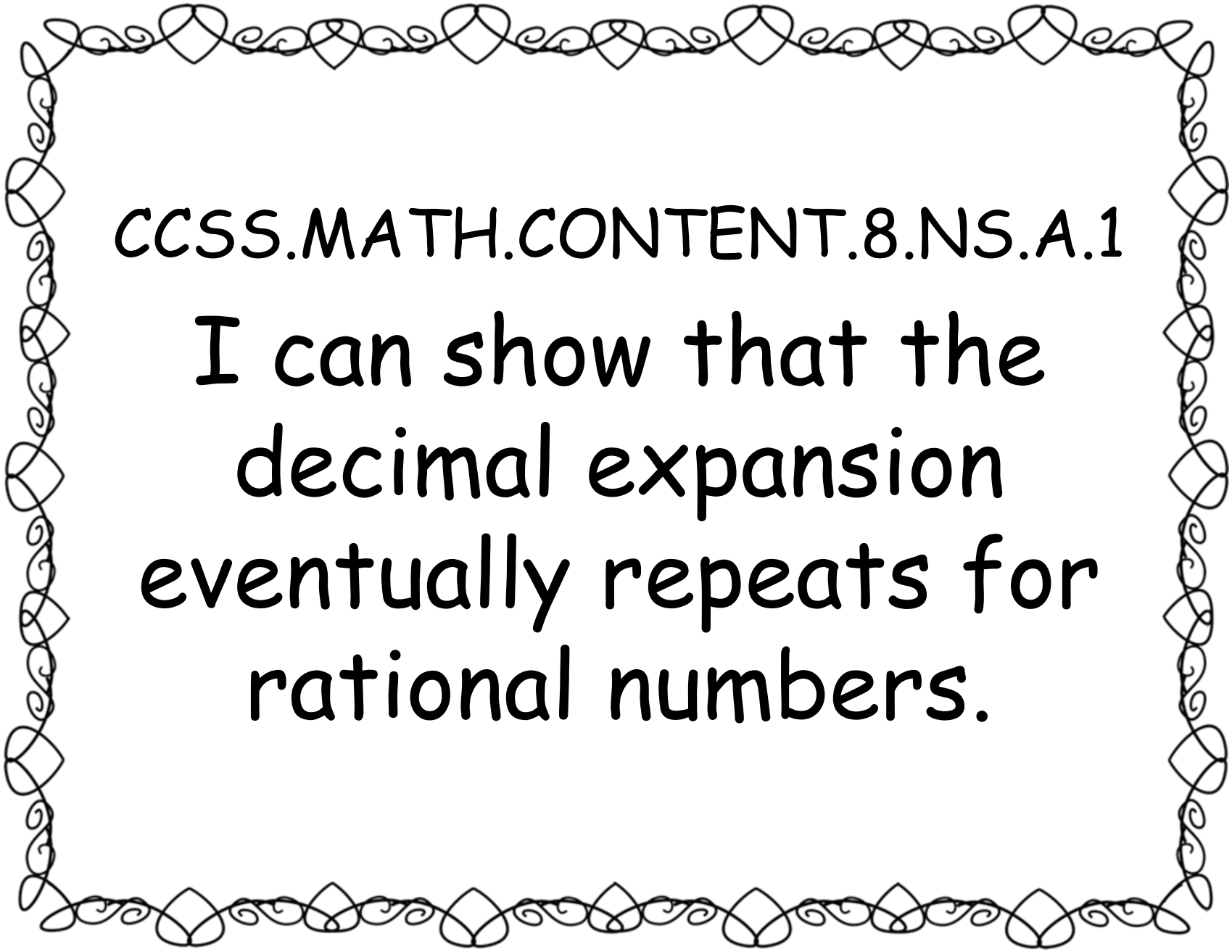
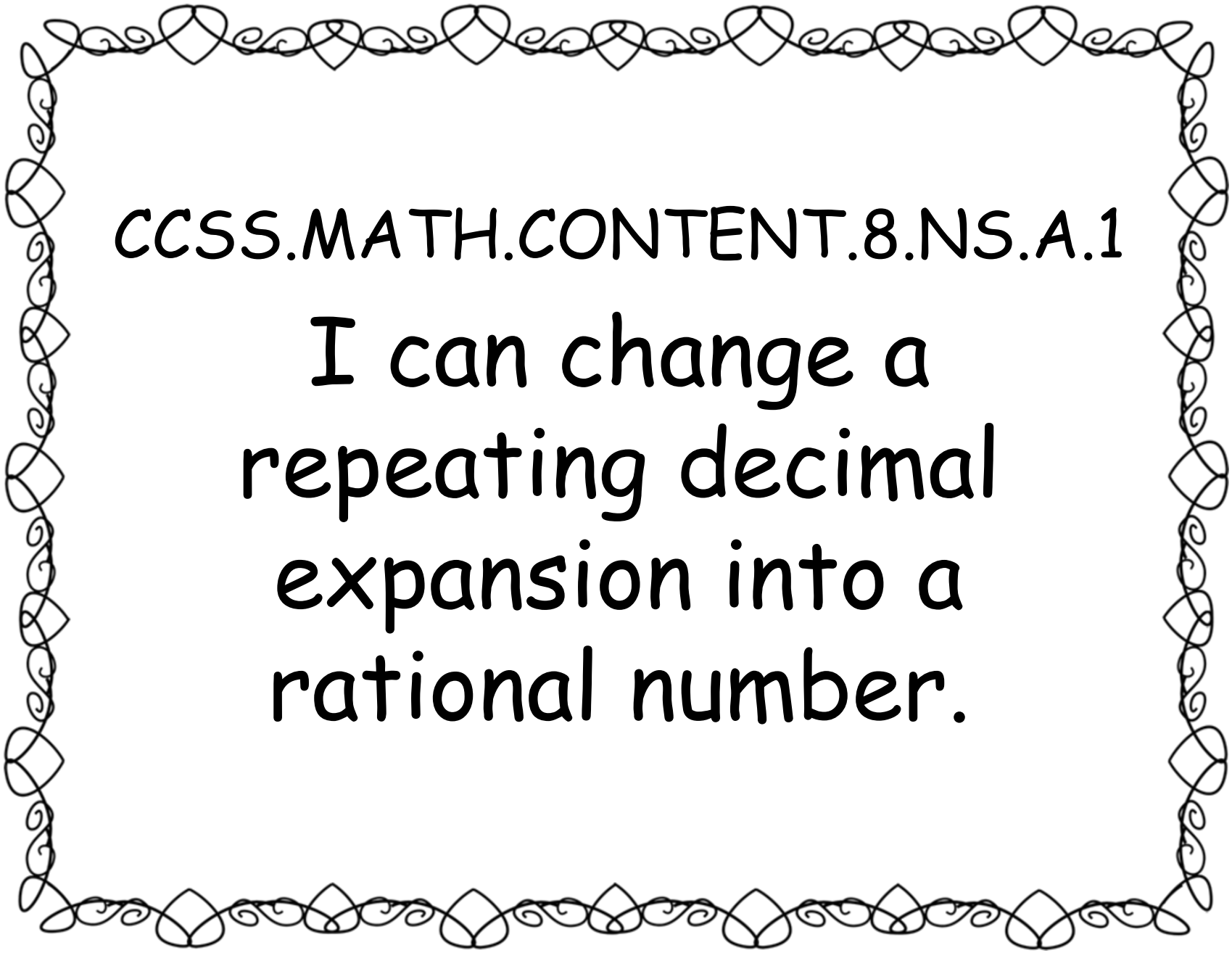
8th Grade Math
The Number System
CCSS "I Can" Statements

CCSS.MATH.CONTENT.8.NS.A.1

I can show that every number has a decimal.


CCSS.MATH.CONTENT.8.NS.A.1
I can change every repeating decimal into a rational number.


CCSS.MATH.CONTENT.8.NS.A.1
I can show that the decimal expansion eventually repeats for rational numbers.


CCSS.MATH.CONTENT.8.NS.A.1
I can change a repeating decimal expansion into a rational number.

CCSS.MATH.CONTENT.8.NS.A.2

I can use rational approximations of irrational numbers to compare the sizes of irrational numbers, locate, and plot them approximately on a number line diagram, and then estimate the value of the expressions.

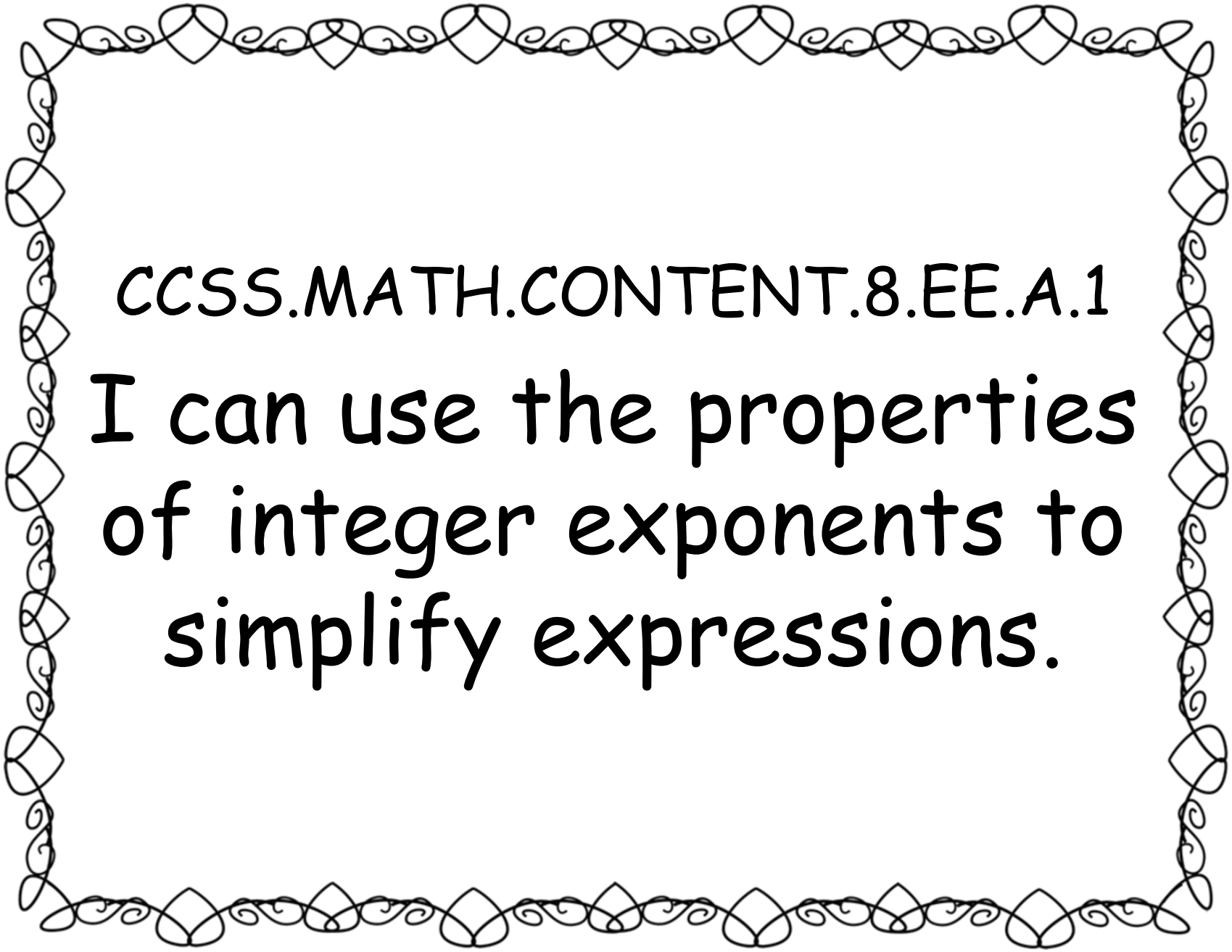
CCSS.MATH.CONTENT.8.NS.A.2

I can use estimate values to compare two or more irrational numbers.

8th Grade Math

Expressions & Equations

CCSS "I Can" Statements


CCSS.MATH.CONTENT.8.EE.A.1
I can use the properties of integer exponents to simplify expressions.

CCSS.MATH.CONTENT.8.EE.A.2

I can use square and cube root symbols to represent solutions to equations of the form $x^2=p$ and $x^3=p$, where p is a positive rational number.

CCSS.MATH.CONTENT.8.EE.A.2

I can evaluate the square root of a perfect square and the cube root of a perfect cube.

CCSS.MATH.CONTENT.8.EE.A.2

I can understand that the square root of 2 is irrational.

CCSS.MATH.CONTENT.8.EE.A.3

I can write an estimation of a large quantity by expressing it as the product of a single-digit number and a positive power of ten.

CCSS.MATH.CONTENT.8.EE.A.3

I can write an estimation of a very small quantity by expressing it as the product of a single-digit number and a negative power of ten.

CCSS.MATH.CONTENT.8.EE.A.3

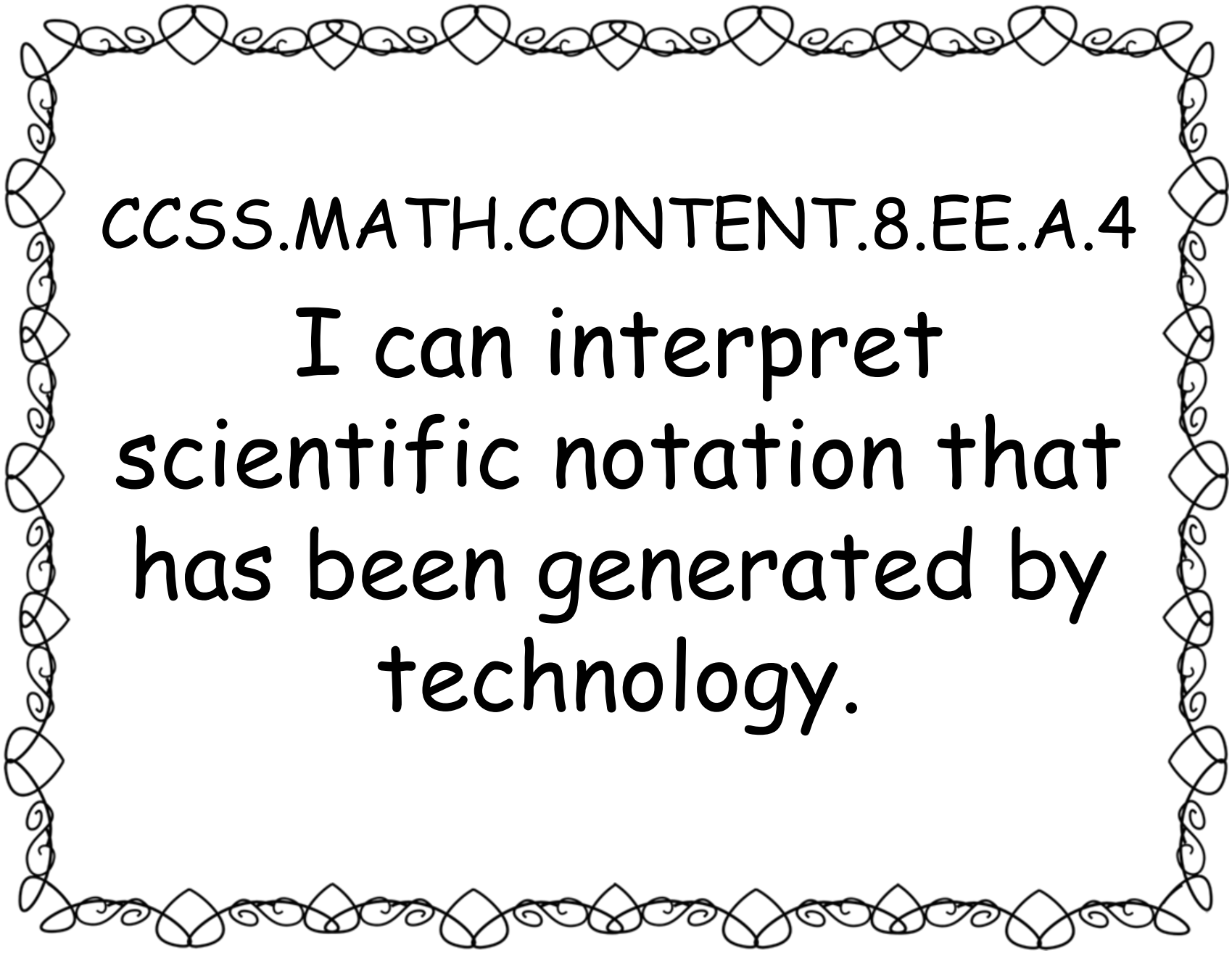
I can compare quantities written as the product of a single-digit number and a power of ten.

CCSS.MATH.CONTENT.8.EE.A.4

I can solve operations (+,-,x,÷) with two numbers expressed in scientific notation, including problems that include both decimals and scientific notation.

CCSS.MATH.CONTENT.8.EE.A.4

I can use scientific notation and choose units of appropriate size for very large or very small measurements.


CCSS.MATH.CONTENT.8.EE.A.4
I can interpret scientific notation that has been generated by technology.

CCSS.MATH.CONTENT.8.EE.B.5

I can graph proportional relationships, interpreting the unit rate as the slope of the graph.

CCSS.MATH.CONTENT.8.EE.B.5

I can use a table, an equation or graph to decide the unit rate of a proportional relationship.

CCSS.MATH.CONTENT.8.EE.B.5

I can use the unit rate of a graphed proportional relationship to compare different proportional relationships.

CCSS.MATH.CONTENT.8.EE.B.6

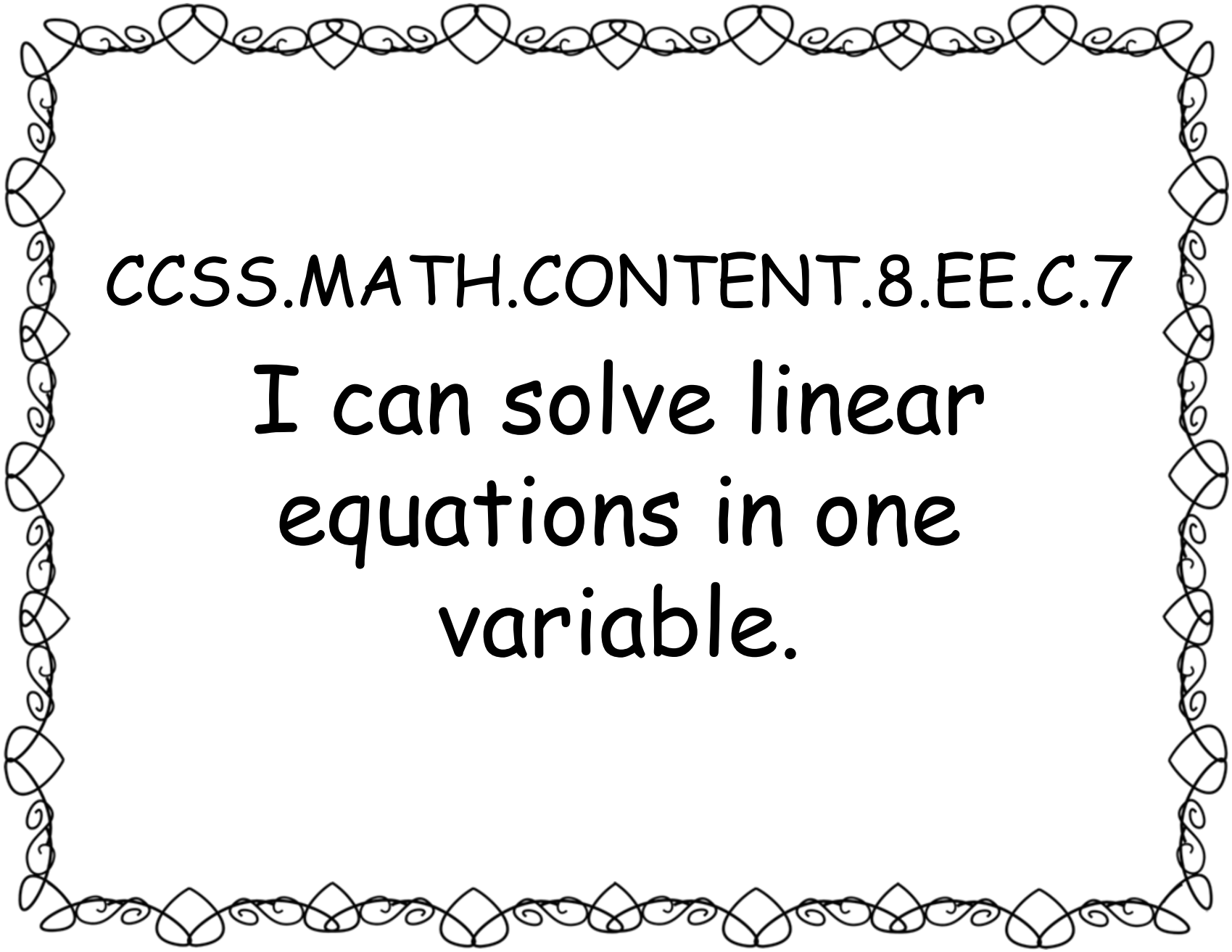
I can use similar triangles to explain why the slope *m* is the same between two points on a non-vertical line in a coordinate plane.

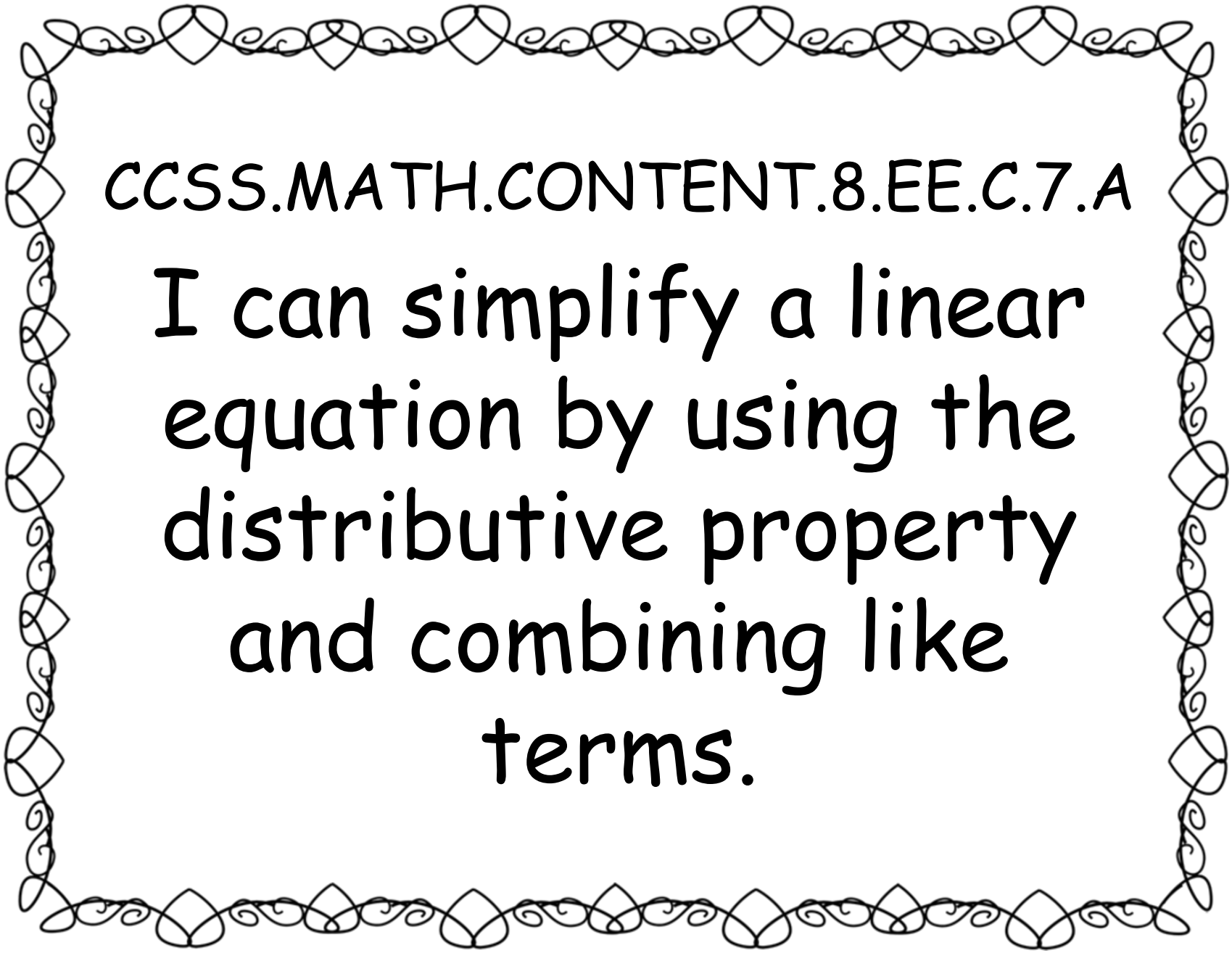
CCSS.MATH.CONTENT.8.EE.B.6

I can explain that an equation in the form of $y=mx$ will represent the graph of a proportional relationship with a slope of m and y-intercept of 0.

CCSS.MATH.CONTENT.8.EE.B.6

I can explain that an equation in the form of $y=mx + b$ represents the graph of a linear relationship with a slope of m and a y-intercept of b.


CCSS.MATH.CONTENT.8.EE.C.7
I can solve linear equations in one variable.


CCSS.MATH.CONTENT.8.EE.C.7.A
I can simplify a linear equation by using the distributive property and combining like terms.

CCSS.MATH.CONTENT.8.EE.C.7.A

I can give examples of linear equations with one solution, infinitely many solutions or no solutions.

CCSS.MATH.CONTENT.8.EE.C.7.B

I can solve linear equations with rational number coefficients, including equations when solutions require expanding expressions using the distributive property and combining like terms.

CCSS.MATH.CONTENT.8.EE.C.8

I can analyze and solve pairs of simultaneous linear equations.

CCSS.MATH.CONTENT.8.EE.C.8.A

I can explain solutions to a system of two linear equations in two variables as the point of intersection of their graph.

CCSS.MATH.CONTENT.8.EE.C.8.A

I can describe the point of intersection between two lines as the point that satisfies both equations at the same time.

CCSS.MATH.CONTENT.8.EE.C.8.B

I can solve a system of two equations (linear) in two unknowns algebraically.

CCSS.MATH.CONTENT.8.EE.C.8.B

I can identify cases in which a system of two equations in two unknowns has no solution or an infinite number of solutions.

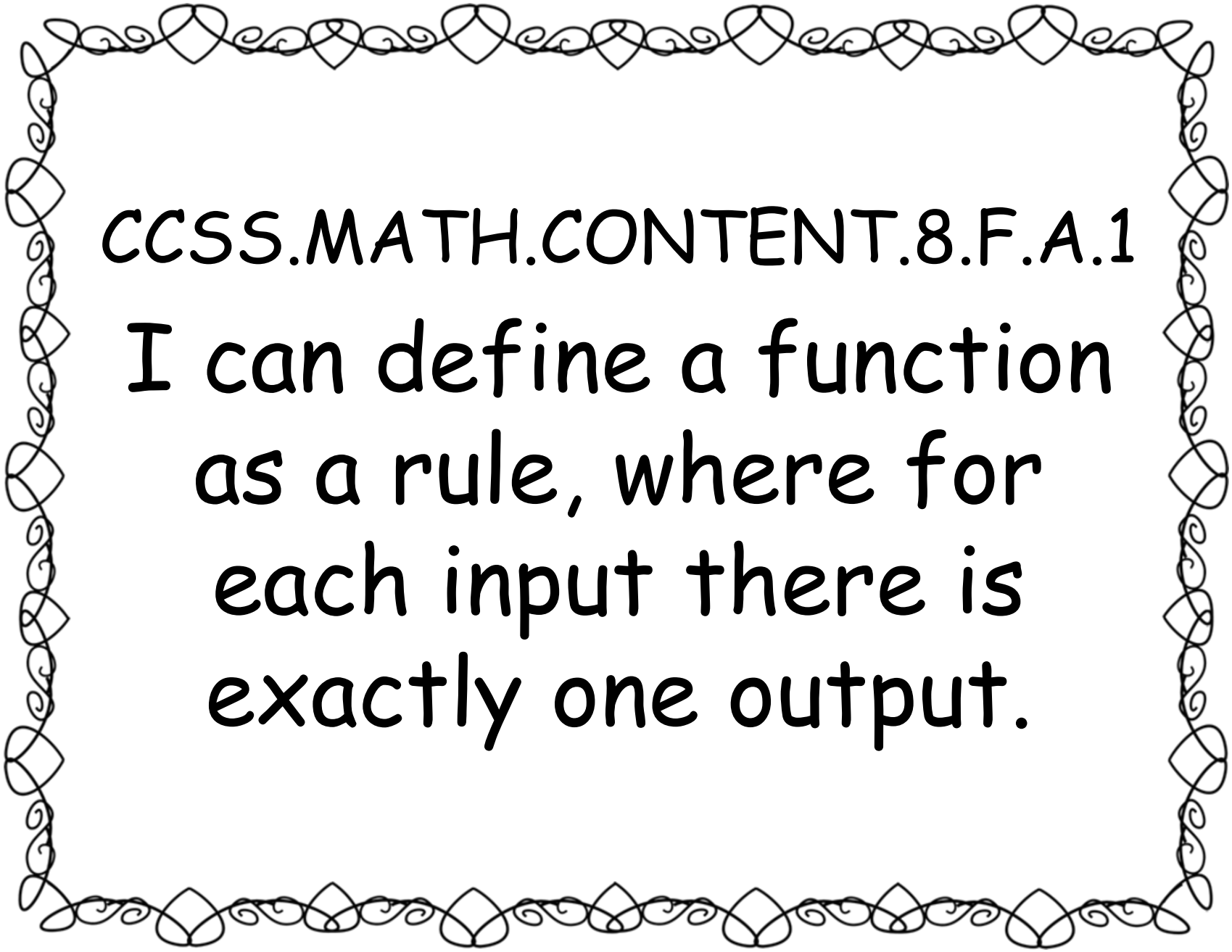
CCSS.MATH.CONTENT.8.EE.C.8.B

I can solve simple cases of systems of two linear equations in two variables by inspection.

CCSS.MATH.CONTENT.8.EE.C.8.C

I can solve real-world and mathematical problems leading to two linear equations in two variables.

8th Grade Math
Functions
CCSS "I Can" Statements


CCSS.MATH.CONTENT.8.F.A.1
I can define a function as a rule, where for each input there is exactly one output.

CCSS.MATH.CONTENT.8.F.A.1

I can show the relationship between inputs and outputs of a function by graphing them as ordered pairs on a coordinate grid.

CCSS.MATH.CONTENT.8.F.A.2

I can determine the properties of a function given the inputs and outputs in a table.

CCSS.MATH.CONTENT.8.F.A.2

I can compare the properties of two functions that are represented differently (as equations, tables, graphs or given verbally).

CCSS.MATH.CONTENT.8.F.A.3

I can explain why the equation $y=mx+b$ represents a linear function and then find the slope and y-intercept in relation to the function.

CCSS.MATH.CONTENT.8.F.A.3

I can give examples of relationships and create a table of values that can be defined as a non-linear function.

CCSS.MATH.CONTENT.8.F.B.4

I can create a function to model a linear relationship between two quantities.

CCSS.MATH.CONTENT.8.F.B.4

I can determine the rate of change and initial value of the function from decryption of the relationship of two (x,y) values, including reading a table or graph.

CCSS.MATH.CONTENT.8.F.B.4

I can find the rate of change and initial value of a linear function in terms of the situation it models and in terms of its graph or a table of values.

CCSS.MATH.CONTENT.8.F.B.5

I can match the graph of a function to a given situation.

CCSS.MATH.CONTENT.8.F.B.5

I can sketch a graph that exhibits the qualitative features of a function that has been described verbally.

8th Grade Math
Geometry
CCSS "I Can" Statements

CCSS.MATH.CONTENT.8.G.A.1

I can verify by measuring and comparing the properties of rotated, reflected or translated geometric figures.

CCSS.MATH.CONTENT.8.G.A.1.A

I can verify that corresponding lines and line segments remain the same length.

CCSS.MATH.CONTENT.8.G.A.1.B

I can verify that corresponding angles have the same measure.

CCSS.MATH.CONTENT.8.G.A.1.C

I can verify that corresponding parallel lines remain parallel.

CCSS.MATH.CONTENT.8.G.A.2

I can explain that a two-dimensional figure is congruent to another if the second figure can be made from the first by rotations, reflections and translations.

CCSS.MATH.CONTENT.8.G.A.2

I can describe a sequence of transformations that shows the congruence between two figures.

CCSS.MATH.CONTENT.8.G.A.3

I can describe the changes to the x- and y- coordinates of a figure after either dilation, translation, rotation or reflection.

CCSS.MATH.CONTENT.8.G.A.4

I can explain how transformation can be used to prove that two figures are similar.

CCSS.MATH.CONTENT.8.G.A.4

I can describe a sequence of transformations that either prove or disprove that two figures are similar.

CCSS.MATH.CONTENT.8.G.A.5

I can informally prove that the sum of any triangle's interior angles will be the same measure as a straight angle (180 degrees).

CCSS.MATH.CONTENT.8.G.A.5

I can informally prove that the sum of any polygon's exterior angles will be 360 degrees.

CCSS.MATH.CONTENT.8.G.A.5

I can estimate the relationships and measurements of the angles created when two parallel lines are cut by a transversal.

CCSS.MATH.CONTENT.8.G.B.6

I can use the Pythagorean Theorem to determine if a given triangle is a right triangle.

CCSS.MATH.CONTENT.8.G.B.6

I can use algebraic reasoning to relate a visual model to the Pythagorean Theorem.

CCSS.MATH.CONTENT.8.G.B.7

I can draw a diagram and use the Pythagorean Theorem to solve real world problems involving right triangles.

CCSS.MATH.CONTENT.8.G.B.7

I can draw a diagram to find right triangles in a three-dimensional figure and use the Pythagorean Theorem to calculate various dimensions.

CCSS.MATH.CONTENT.8.G.B.7

I can apply the Pythagorean Theorem to find an unknown side length of a right triangle.

CCSS.MATH.CONTENT.8.G.B.8

I can apply the Pythagorean Theorem to find the distance between two points in a coordinate system.

CCSS.MATH.CONTENT.8.G.C.9

I can state and apply the formulas for the volumes of cones, cylinders and spheres.

CCSS.MATH.CONTENT.8.G.C.9

I can solve real world problems involving the volume of cones, cylinders and spheres.

8th Grade Math
Statistics & Probability
CCSS "I Can" Statements

CCSS.MATH.CONTENT.8.SP.A.1

I can plot ordered pairs on a coordinate grid representing the relationship between two data sets.

CCSS.MATH.CONTENT.8.SP.A.1

I can describe patterns such as clustering, outliers, positive or negative association, linear association and nonlinear association.

CCSS.MATH.CONTENT.8.SP.A.2

I can recognize if the data plotted on a scatter plot has a linear association.

CCSS.MATH.CONTENT.8.SP.A.2

I can draw a straight line to approximate the linear relationship between the plotted points of two data sets.

CCSS.MATH.CONTENT.8.SP.A.3

I can determine the equation of a trend line that approximates the linear relationships between the plotted points of two data sets.

CCSS.MATH.CONTENT.8.SP.A.3

I can interpret the y-intercept and slope of an equation based on collected data.

CCSS.MATH.CONTENT.8.SP.A.3

I can use the equation of a trend line to summarize the given data and make predictions about additional data points.

CCSS.MATH.CONTENT.8.SP.A.4

I can create and explain a two-way table to record the frequencies of bivariate categorical values.

CCSS.MATH.CONTENT.8.SP.A.4

I can determine the relative frequencies for rows and/or columns of a two-way table.

CCSS.MATH.CONTENT.8.SP.A.4

I can use relative frequencies and the context of a problem to describe possible associations between two sets of data.