

# Common Core Math 7th Grade

Classroom posters, "I can" statements, and vocabulary  
wall cards

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Caught in the Middle

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Common Core  
Standards  
7th Grade Math

# Big Idea #1

I can analyze proportional relationships and use them to solve real-world and mathematical problems.

# Big Idea #2

I can apply and add to my previous knowledge of fractions to add, subtract, multiply, and divide rational numbers.

# Big Idea #3

I can apply my knowledge about properties of operations to create equivalent math expressions.

# Big Idea #4

I can solve real-life math problems using number and algebra expressions and equations.

# Big Idea #5

I can draw, construct, and describe geometric figures and how they are related to each other.

# Big Idea #6

I can solve real life math problems that include angle measure, area, surface area, and volume.



# Big Idea #7

I can use a random sample to draw inferences about a population.

# Big Idea #8

I can draw comparative inferences about two populations.

# Big Idea #9

I can investigate chance processes, and develop, use, and evaluate probability models.

Vocabulary  
Cards  
from  
the  
Big Ideas

analyze

proportion

rational  
numbers

properties of  
operations

equivalent

expression

algebra

equation



geometric

surface

area

volume

area

random  
sample

draw  
inferences

population

comparative

investigate

chance  
processes

evaluate

probability  
models

Learning  
Objectives  
for each  
Big Idea

7.RP.1

I can solve rate problems that deal with ratios of length, area and other measurements with like or different units.

7.RP.2

I can recognize and show proportions in equations, on function tables and on a graph.



7.RP.2

I can identify the constant of proportionality, or unit rate, in a table, graph, equation, diagram, or description.

7.PR.3

I can use proportions to solve multistep ratio and percent problems, such as tax, commissions, gratuities, markups, markdowns, percent increase and decrease, and percent error.

7.NS.1

I can apply and expand my prior knowledge of addition and subtraction to add and subtract rational numbers and to represent them on a horizontal or vertical number line.

7.NS.1

I can describe real world situations using opposite quantities to make 0.

7.NS.1

I understand that additive inverse shows a number and its opposite combine to make 0, and that a number's distance from 0 is called absolute value.

7.NS.1

I understand that a number's distance from 0 is called its absolute value.

7.NS.1

I can apply properties of operations as strategies to add and subtract rational numbers.

7.NS.2

I can apply and extend previous knowledge of multiplication and division of fractions to multiply and divide rational numbers.

7.NS.2

I understand that multiplication of fractions and rational numbers use the properties of operations and the rules for multiplying signed numbers.

7.NS.2

I can interpret products of rational numbers by giving real-world examples.

7.NS.2

I understand that integers can be divided, as long as the divisor is not zero, and the answer will be a rational number.

7.NS.2

I can interpret products of rational numbers by giving real-world examples.

7.NS.2

I can apply properties of operations as strategies to multiply and divide rational numbers.

7.NS.2

I can convert a rational number to a decimal using long division, and know that the quotient will either terminate or repeat.

7.NS.3

I can solve real-world and mathematical problems using the four operations with rational numbers.

7.EE.1

I can apply properties of operations as a strategy to add, subtract, factor, and expand linear expressions with rational coefficients.



7.EE.2

I can rewrite an expression in a different way, and that will help me understand the problem and how the numbers are related.

7.EE.3

I can solve multiple step real-life and math problems with positive and negative rational numbers as whole numbers, fractions, and decimals.

7.EE.3

I can apply properties of operations to calculate numbers in any form, convert between forms, and assess the reasonableness of the answers using mental math and estimation strategies.

7.EE.4

I can use variables to represent quantities in real-world and math problems, and write simple equations and inequalities to solve problems by reasoning.

7.G.1

I can solve problems using scale drawings of geometric figures.

7.G.1

I can compute actual lengths and areas from a scale drawing and reproduce a scale drawing at a different scale.

7.G.2

I can draw specific geometric shapes by hand, or by using rulers, protractors, and other technology.

7.G.1

I can create a triangle from 3 angle measurements or side lengths.

7.G.2

I know the characteristics that determine a special triangle, more than one triangle, or no triangle.

7.G.3

I can name and describe the 2D shape that is created as a result of a specific 3D shape being sliced.

7.G.4

I know the formula for the area and circumference of a circle and can use them to solve problems.

7.G.4

I can give an informal derivation of the relationship between circumference and area in a circle.

7.G.5

I can use facts about supplementary, complementary, vertical and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.

7.G.6

I can solve real-world and math problems involving area, volume, and surface area of 2D and 3D objects made up of triangles, quadrilaterals, polygons, cubes, and right prisms.

7.SP.1

I understand that statistics is used to gain information about a population by examining a sample of that population.

7.SP.1

I understand that generalizations about a population from a sample are only valid if the sample is representative of that population.



7.SP.1

I understand that random samples produce representative samples and support valid inferences.

7.SP.2

I can use data from a random sample to draw inferences about a population with an unknown characteristic of interest.

7.SP.2

I can generate multiple samples of the same size to gauge the variation in estimates or predictions.

7.SP.3

I can compare, predict, and draw conclusions about the differences in two similar, but separate sets of data by looking at the mean and expressing it as a multiple of a measure of variability.

7.SP.4

I can use median, mean, range and mean absolute deviation, and interquartile range from a random sample of data to draw comparative inferences about two populations.

7.SP.5

I understand that probability of a chance event is a number between 0 and 1.

7.SP.5

I understand that in probability,  
the larger the number, the  
greater the likelihood an event  
will occur.

7.SP.5

I understand that a probability near 0 means  
an unlikely event, a probability near  $1/2$   
means the event is neither likely nor  
unlikely, and that a probability near 1 means  
that the event is very likely to occur.

7.SP.5

I understand that in probability, the larger the number, the greater the likelihood an event will occur.

7.SP.6

I can approximate the probability of a chance event by collecting data and observing its long-run relative frequency, and predict the approximate relative frequency given the probability.

7.SP.7

I can develop an experiment,  
and collect results to compare  
the outcomes of the  
experimental probabilities.

7.SP.7

I can compare and contrast  
experimental and theoretical  
probabilities, and explain the  
discrepancies.

7.SP.8

I can find the probabilities of compound events using tables, tree diagrams, lists, and simulations.

Vocabulary Cards  
from  
Learning  
Objectives



function  
table

constant of  
proportionality

unit rate

diagram

commission

gratuities

mark up

mark down

apply

expand

additive

inverse

absolute  
value

strategies

extend

signed  
number

linear  
expression

coefficient



convert

divisor

quotient

terminating  
decimal

interpret

quantities

inequalities

reasoning

derivation

adjacent

vertical

complementary  
angles

supplementary  
angles

quadrilaterals

prism

population



sample

generalizations

valid

representative

random

gauge

estimates

variation

mean

measure of  
variability

median

range

absolute  
deviation

deviation

interquartile  
range

interquartile



random  
sample

comparative  
inferences

probability

chance

event

relative  
frequency

frequency

outcomes

experimental  
probability

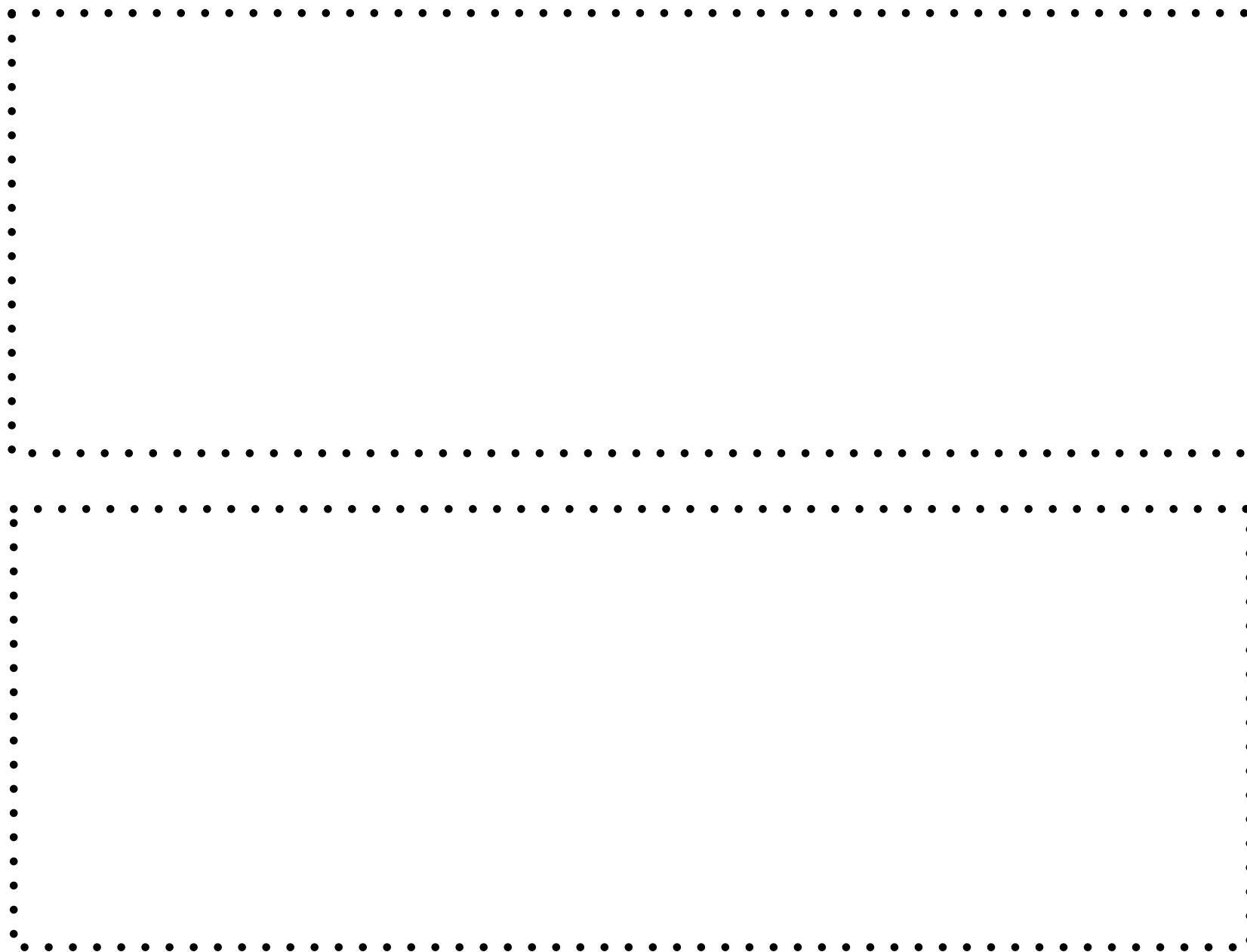
theoretical  
probability

discrepancy

compound  
events

tree diagram

simulation





# Common Core Math 7th Grade

I hope that you will be able to use these in your classroom! If you have enjoyed your download, please consider rating my product, following my [TpT](#) site and blog, [Caught in the Middle](#).

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