

### Form 6.3: Course Outline with Assessment Ideas and Activities

Course Title: Math 7: Online Component

Module Number and Name: 1. Number Sets

Objective	Assessment Ideas	Absorb	Do	Connect
1 Students will perform addition, subtraction, multiplication, and division of whole numbers 0-10 without the aid of a calculator at 90% proficiency.	Quiz	Review a multiplication table.	Practice math facts at <a href="http://mathfactspro.com">mathfactspro.com</a>	Record situations in which addition, subtraction, multiplication, and division are required to their class portfolio.
2 Students will create their own mnemonic device to remember the order of operations.	Discussion Board	Read about different types of mnemonic devices. <a href="http://www.learningassistance.com/2006/january/mnemonics.html">http://www.learningassistance.com/2006/january/mnemonics.html</a>	Post to discussion board.	Write your own mnemonic device to demonstrate order of operations.
3 Students will relate integer operations to financial situations.	Discussion Board	View video at <a href="http://www.khanacademy.org">www.khanacademy.org</a>	Post to discussion board.	Students will write their own situation involving financial math with integers and save to their class portfolio.
4 Students will breakdown key unit terms, writing a definition in their own words, and explain practical applications. (Key terms: Absolute Value, Additive Inverse, Integers, Opposites, Rational Number, Repeating Decimal, Terminating Decimal)	Blog Post	Read key term definitions in their textbook.	Complete an internet search on the key terms.	Students will record definitions in their own words and provide an authentic example of each. This will be posted to their blog/class portfolio.

Course Title: Math 7: Online Component  
 Module Number and Name: 2. Algebra

Objective	Assessment Ideas	Absorb	Do	Connect
1 Students will evaluate expressions, when values are given for all variables with 90% accuracy.	Quiz	View video at <a href="http://www.khanacademy.org">www.khanacademy.org</a>	Practice substitution and evaluating expression	Students will pick a formula and give an example for substitution. Add to portfolio/blog.
2 Students will translate a verbal expression into a mathematical (numerical) expression with 90% accuracy.	Quiz	Students will read/view class lecture.	Practice translating expressions	Students will write an original word problem and translate into a mathematical expression/equation. Add to portfolio/blog
3 Students will demonstrate their understanding of combining like terms through writing or illustrating a story to add meaning.	Prezi Presentation or other virtual presentation	View video at <a href="http://www.khanacademy.org">www.khanacademy.org</a>	Students will practice combining like terms	Write an original story problem involving like terms and show solving. Add to portfolio/blog.
4 Students will justify solving equations and inequalities and clarify what is undoing.	Discussion Board	Students will review samples of solving equations with steps justified.	Post to discussion board.	Students will create their own problem to solve with five steps and label appropriately. Add to blog/portfolio
5 Students will breakdown key unit terms, writing a definition in their own words, and explain practical applications. (Key terms: Addition Property of Equality, Division Property of Equality, Equality, Equivalent Equations, Factoring, Inequality, Like Terms, Linear Expression, Multiplication Property of Equality, Solution Set, Subtraction Property of Equality )	Blog Post	Read key term definitions in their textbook.	Complete an internet search on the key terms.	Students will record definitions in their own words and provide an authentic example of each. This will be posted to their blog/class portfolio.

Course Title: Math 7: Online Component  
 Module Number and Name: 3. Proportional Reasoning

Objective	Assessment Ideas	Absorb	Do	Connect
1 Students will simplify fractions, including proper, improper, and mixed numbers with 90% accuracy.	Quiz	View video at <a href="http://www.khanacademy.org">www.khanacademy.org</a>	Practice simplifying fractions.	Write in your own words the process for simplifying each type of fraction. Give an example of each. Add to portfolio/blog.
2 Students will solve one-step equations where division is the required operation with 90% accuracy.	Quiz	View video at <a href="http://www.khanacademy.org">www.khanacademy.org</a>	Practice solving one-step equations	
3 Students will convert between number forms of fractions, decimals, and percents with 90% accuracy	Quiz	View video at <a href="http://www.khanacademy.org">www.khanacademy.org</a>	Practice number conversions.	Write in your own words the steps to converting between number forms. Give an authentic example of each. Add to portfolio/blog.
4 Students will identify equivalent proportions and justify their reasoning using the rules of exchanging the means, taking the reciprocal, or adding multiples of the denominator.	Discussion Board	Read/view class lecture.	Post to discussion board.	Students will share real-world examples of proportions. Add to portfolio/blog.
5 Students will breakdown key unit terms, writing a definition in their own words, and explain practical applications. (Key terms: Complex Fraction, Constant of Proportion, Cross Products, Cross Products Property, Direct Variation, Discount, Interest, Markup, Percent of Change, Percent of Decrease, Percent Error, Percent of Increase, Principal, Proportion, Proportional, Rate, Ratio, Simple Interest, Slope, Unit Rate)	Blog Post	Read key term definitions in their textbook.	Complete an internet search on the key terms.	Students will record definitions in their own words and provide an authentic example of each. This will be posted to their blog/class portfolio.

Course Title: Math 7: Online Component  
 Module Number and Name: 4. Geometry

Objective	Assessment Ideas	Absorb	Do	Connect
1 Students will measure angles with a protractor and classify as acute, obtuse, right or straight with 90% accuracy.	Quiz	View video at <a href="http://www.khanacademy.org">www.khanacademy.org</a>	Practice measuring angles and classifying.	Students will add real-world situations in which each of the types of angles occur and give an authentic example of where precision in measuring angles is necessary. Add to portfolio/blog.
2 Students will evaluate expressions with exponents (power 2 only) including expressions requiring order of operations with 90% accuracy.	Quiz	View video at <a href="http://www.khanacademy.org">www.khanacademy.org</a>	Practice evaluating expressions.	Students will provide real-world applications of exponents. Add to portfolio/blog.
3 Students will find volume of rectangular prisms, with unit cubes shown, with 90% accuracy.	Quiz	View video at <a href="http://www.khanacademy.org">www.khanacademy.org</a>	Practice finding volume.	Students will design a rectangular box that will hold a specified quantity. They will provide three examples of dimensions that each give the same volume. Add to portfolio/blog.
4 Students will illustrate their understanding of geometric shapes in the real world, both 2D and 3D.	Prezi Presentation or other virtual presentation software (ex. iMovie)	View sample presentation	Complete a 2D and 3D geometric scavenger hunt.	Present findings in an iMovie or other presentation software.
5 Students will breakdown key unit terms, writing a definition in their own words, and explain practical	Blog Post	Read key term definitions in their textbook.	Complete an internet search on the key terms.	Students will record definitions in their own words and

Form adapted from Smith, R. M. *Conquering the Content*. San Francisco: Jossey-Bass, 2008.

<p>applications. (Key terms: Adjacent Angles, Center (of a circle), Circle, Circumference, Composite Figure, Complementary Angles, Congruent Angles, Congruent Sides, Diameter, Edge, Face, Kite, Net, Pi, Polyhedron, Prism, Pyramid, Radius (of a circle), Scale Drawing, Scale Factor, Semicircle, Solid, Supplementary Angles, Surface Area, Vertex, Vertical Angles, Volume)</p>				<p>provide an authentic example of each. This will be posted to their blog/class portfolio.</p>
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Course Title: Math 7: Online Component

Module Number and Name: 5. Probability and Statistics

Objective	Assessment Ideas	Absorb	Do	Connect
1 Students will interpret real world situations and quantify accurately using a ratio.	Quiz	Read/view class lecture notes	Practice finding ratios.	Record own example in class portfolio.
2 Students will find measures of central tendency (mean, median, and mode) with 90% accuracy.	Quiz	View video at <a href="http://www.khanacademy.org">www.khanacademy.org</a>	Students will practice finding measures of central tendency.	Collect data from classmates and analyze mean, median, mode and range. Determine which measure of central tendency best fits the data.
3 Students will demonstrate their understanding of coins, dice, and a deck of cards in terms of probability.	Discussion Board	View video at <a href="http://www.khanacademy.org">www.khanacademy.org</a>	Post to discussion board.	Write own probability problem involving dice, cards, and coins and solve showing knowledge of probability.
4 Students will breakdown key unit terms, writing a definition in their own words, and explain practical applications. (Key terms: Biased Sample, Compound Events, Dependent Events, Event, Experiment, Experimental Probability, Favorable Outcomes, Fundamental Counting Principle, Independent Events, Outcomes, Population, Probability, Relative Frequency, Sample, Sample Space, Simulation, Theoretical Probability, Unbiased Sample)	Blog Post	Read key term definitions in their textbook.	Complete an internet search on the key terms.	Students will record definitions in their own words and provide an authentic example of each. This will be posted to their blog/class portfolio.

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