

GRADE 8 MATH PROGRAM 2011-2012

Resources:

- Prentice Hall *Algebra*
- Class notes and handouts

CALENDAR	MODULE/LESSONS	OBJECTIVES	PROJECTS/ACTIVITIES/ TESTS
<i>September- October</i>	Variables, Function Patterns, and Graphs	Students should be able to <ul style="list-style-type: none"> • model relationships with variable and equations; • simplify and evaluate expressions and formulas following the order of operations; • classify and compare numbers; • write a function rule; • understand the relationship of quantities in a function; • analyze data using scatter plots; • calculate mean, median, mode, range; • use a stem and leaf plot. 	PROJECT/ MID CHAPTER TEST/CHAPTER TEST
<i>October</i>	Rational Numbers	Students should be able to <ul style="list-style-type: none"> • add, subtract, multiply and divide rational numbers; • simplify algebraic expressions and use the distributive property; • use deductive reasoning. 	PROJECT/ MID CHAPTER TEST/CHAPTER TEST
<i>November</i>	Solving Equations	Students should be able to <ul style="list-style-type: none"> • solve two-step equations; • use the distributive property when combining like-terms and solving equations; • solve equations with variables on both sides; • find ratio and rates; • solve proportions; • find missing measures of similar figures; • define variables in terms of another variable; • model distance-rate-time problems; • find and estimate square roots; 	PROJECT/ MID CHAPTER TEST/CHAPTER TEST

		<ul style="list-style-type: none"> • solve problems using the Pythagorean Theorem. 	
<i>December</i>	Solving Inequalities	<p>Students should be able to</p> <ul style="list-style-type: none"> • identify solutions of inequalities; • graph and write inequalities; • solve inequalities using addition, subtraction, multiplication, division; • solve multi-step inequalities; • solve absolute value equations and inequalities. 	PROJECT/ MID CHAPTER TEST/CHAPTER TEST
<i>January</i>	Graphs and Functions	<p>Students should be able to</p> <ul style="list-style-type: none"> • relate graphs to events; • identify and evaluate functions; • model function rules, tables and graphs; • write a function rule; • write an equations for direct and inverse variation; • compare direct and inverse variation; • use deductive reasoning to describe number patterns. 	PROJECT/ MID CHAPTER TEST/CHAPTER TEST
<i>February</i>	Linear Equations and their Graphs	<p>Students should be able to</p> <ul style="list-style-type: none"> • find rates of change from tables and graphs; • find slope of a linear equation; • write linear equations in slope-intercept form, standard form, point-slope form; • interpret linear graphs; • determine whether lines are parallel or perpendicular. 	PROJECT/ MID CHAPTER TEST/CHAPTER TEST
<i>March</i>	Systems of Equations Inequalities	<p>Students should be able to solve systems of linear equations by</p> <ul style="list-style-type: none"> • graphing, • substitution, • elimination. 	PROJECT/ MID CHAPTER TESTS/CHAPTER TESTS
<i>April</i>	Exponents and Exponential Functions	<p>Students should be able to</p> <ul style="list-style-type: none"> • simplify expressions with zero and negative exponents; • write in Scientific Notation; • use multiplication properties of exponents; • use division properties of exponents; • evaluate exponential functions. 	PROJECT/ MID CHAPTER TESTS/CHAPTER TESTS

<i>May</i>	Polynomials and Factoring	Students should be able to <ul style="list-style-type: none"> • describe polynomials; • add, subtract, multiply and divide polynomials; • factor a monomial from a polynomial; • factor trinomials; • factor perfect square trinomials; • factor the difference of two squares; • factor trinomials by grouping. 	PROGECT/ MID CHAPTER TESTS/CHAPTER TESTS
<i>June</i>	Introduction to Quadratic Equations and Functions	Students should be able to <ul style="list-style-type: none"> • graph quadratic functions; • solve quadratic equations; use the quadratic formula 	PROGECT/ MID CHAPTER TEST/CHAPTER TEST

QUIZZES: Depending on length of chapter and student responsiveness, quizzes may be done in the middle of a chapter to assess if students are assimilating concepts correctly.

STUDENT ASSESSMENT: Homework, class notebooks, tests/quizzes, activities, projects.

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