From 1st Term	2nd Term	PI	Integrated Algebra Term 2 Curriculum FOR FALL 2007 Prepared Exclusively by AMAPS
			Introduction to the Instructor TERM 2 This calendar of lessons was prepared as a textbook independent sequence of lessons and the order of topics can be modified based on the textbook selection. The columns to the left are entitled: • **From 1st Term** to indicate the continuation of the numbering of the lessons from the first term through the second term to allow for three and four semester sequences of this course. • **2nd Term** to indicate the lesson number for the second term only • **PI** for the **content performance indicator(s)** covered in the lesson. The content performance indicators were matched to the NYSED- Mathematics Core Curriculum, MST Standard 3 Pre-kindergarten – Grade 12; Revised 2005 document, Integrated Algebra section, pages 94-100. CONTENT INDICATORS tell the instructor WHAT to teach while PROCESS INDICATORS tell the instructor HOW to teach it. Process indicators are also listed in the NYSED Mathematics Core Curriculum document, however because they involve problem solving, representation, communication, connections, and reasoning and proof, they are part of all lessons not just a select few and are not indicated as part of any individual lesson in this document. As the instructor prepares each lesson, the PROCESS STRANDS must be included on a regular and an ongoing basis. The complete list of process and content indicators can be found at www.emsc.nysed.gov or you may find this document on the AMAPS website at www.amaps.org beginning in July 2007. Instructors are strongly advised to consult the Integrated Algebra Sample Tasks document, also available at the sites listed above. These sample tasks serve to further clarify the scope and depth of the content and process strands alike. It should be noted that the use of a variety of hands-on manipulative devices as well as extensive use of the graphing calculator, for the purpose of student exploration and discovery of mathematical concepts, is strongly evident in the Mathematics Core Curriculum document. These materials should be available for classroom use.

From 1st Term	2nd Term	PI	Integrated Algebra Term 2 Curriculum FOR FALL 2007 Prepared Exclusively by AMAPS
62	1	AG4 AA28 AA27	Lesson #1 AIM: How do we solve a quadratic equation? Students will be able to: 1. argue that if the product of two factors is zero then at least one of the factors must be equal to zero (the Multiplication Property of Zero) 2. state the definition of a quadratic equation and write quadratic equations in standard form 3. connect the multiplication property of zero and the process of factoring in order to solve quadratic equations 4. state the procedure used for solving quadratic equations 5. state that a quadratic equation has two roots, two zeros, two solutions 6. check both solutions of a quadratic equation Writing for Understanding: 1) Explain the difference between a linear equation and a quadratic equation.
63	2	AA28 AG4	Lesson #2 AIM: How do we solve more difficult quadratic equations? Students will be able to: 1. solve more complex quadratic equations using techniques developed in the previous lesson 2. check both solutions of a quadratic equation 3. write the quadratic equation in the form $ax^2 + bx + c = 0$, given the roots of the equation Writing for Understanding: 1) Describe the justification for setting each factor equal to zero when solving a quadratic equation.
64	3	AA8 AA28	Lesson #3 AIM: How do we solve numerical verbal problems leading to a quadratic equation? Students will be able to: 1. describe the problem situation in their own words 2. create a model that can be used to represent the problem situation by using a diagram, charting, manipulative tools, and/or a graphic organizer 4. create an algebraic representation for the problem situation 5. solve verbal problems leading to a quadratic equation 6. apply the concepts of ratio and proportion to solve verbal problems leading to a quadratic equation 7. check solutions to problems against the conditions of the problem 8. write solutions to problems in complete sentences Writing for Understanding: 1) Create a real-life situation which must be solved using a quadratic equation.

From 1st Term	2nd Term	PI	Integrated Algebra Term 2 Curriculum FOR FALL 2007 Prepared Exclusively by AMAPS
65	4	AA8 AA28	Lesson #4 AIM: How do we solve consecutive integer problems leading to a quadratic equation? Students will be able to: 1. describe the problem situation in their own words 2. create a model that can be used to represent the problem situation by using a diagram, charting, manipulative tools, and/or a graphic organizer 3. create an algebraic representation for the problem situation 4. solve consecutive integer problems leading to a quadratic equation 5. check solutions to problems against the conditions of the problem 6. write solutions to problems in complete sentences Writing for Understanding: 1) A quadratic equation can have two roots with different values. Describe a real-life situation in which one of those roots must be rejected.
66	5	AA8 AA28	Lesson #5 AIM: How do we solve area problems leading to a quadratic equation? Students will be able to: 1. describe the problem situation in their own words 2. create a model that can be used to represent the problem situation by using a diagram, charting, manipulative tools, and/or a graphic organizer 3. recall and state the formulas for finding the areas of triangles and quadrilaterals 4. create an algebraic representation for the problem situation 5. solve area problems leading to quadratic equations involving quadrilaterals and triangles 6. state the answer to problem in sentence form 7. check solutions to quadratic equation against the conditions in the problem Writing for Understanding: 1) Explain how it is possible for two rectangles to have the same area but not the same dimensions.

From 1st Term	2nd Term	PI	Integrated Algebra Term 2 Curriculum FOR FALL 2007 Prepared Exclusively by AMAPS
67	6	AN2	Lesson #6 AIM: What is the relationship between rational and irrational numbers? Students will be able to: 1. define rational number, irrational number and real number 2. discover the relationships among rational numbers, irrational numbers and the set of real numbers 3. create a number line showing the ordering of rational and irrational numbers 4. sort a list of numbers into rational or irrational 5. explain the historical reasons for using the word 'irrational' to name the irrational numbers 6. state the definition of square root, a perfect square, index, and radicand 7. find the square root of perfect and non-perfect squares using a calculator Writing for Understanding: 1) Explain the difference between a rational number and an irrational number.
68	7	AN2	Lesson #7 AIM: How do we simplify radicals with numerical radicands? Students will be able to: 1. discover the properties of radicals that govern writing a radical as a product of radicals 2. create a procedure for the simplification of irrational expressions 3. apply the procedure for simplification of irrational expressions to appropriate radicals 4. explain orally and in writing, how to determine if a radical is in simplest form Writing for Understanding: 1) Describe how simplifying a radical is like reducing a fraction to lowest terms. 2) Susan said that addition is a binary operation and that finding a cube root is a unary operation. Comment on her statement. .
69	8	AN2 AN3	Lesson #8 AIM: How do we multiply and divide radicals with numerical radicands? Students will be able to: 1. recall the rules used to multiply radicals and extend them to create rules for the division of radicals 2. distinguish whether or not a product or quotient is rational or irrational by citing the definitions as evidence 3. multiply and divide radicals and express products and quotients in simplest radical form 4. rationalize a fraction with a radical monomial denominator Writing for Understanding: 1) Maria said that the index of a radical is like the denominator of a fraction. Make an argument supporting her statement.

From 1st Term	2nd Term	PI	Integrated Algebra Term 2 Curriculum FOR FALL 2007 Prepared Exclusively by AMAPS
70	9	AN2 AN3	Lesson #9 AIM: How do we add and subtract radicals? Students will be able to: 1. discover the parallels between like radicals and like monomials 2. compare and contrast, both orally and in writing the definitions of like algebraic terms and like radicals 3. create a definition of like radicals 4. compare and contrast the procedures used to compute the sum and difference of like radicals to the procedures used to compute the sum and difference of like algebraic terms 5. compute the sums and differences of like radicals 6. describe how the sum and difference of unlike radical expressions are written 7. determine if the sum or difference of radicals is rational or irrational by applying appropriate definitions Writing for Understanding: 1) Compare and contrast like radicals to like monomial terms. 2) Write a statement explaining why the following is wrong: $3\sqrt{2} - \sqrt{2} = 3$.
71	10	AA45	Lesson #10 AIM: What is the Pythagorean Theorem? Students will be able to: 1. define a right triangle and identify its legs and hypotenuse 2. discover the relationship between the legs and the hypotenuse of a right triangle through an appropriate activity 3. state and write the Pythagorean Theorem as: "In a right triangle, the square of the hypotenuse is equal to the sum of the squares of its legs." or $(hyp)^2 = (leg\ 1)^2 + (leg\ 2)^2$ 4. apply the Pythagorean Theorem to find the length of any missing side of a right triangle given the lengths of two of its sides 5. state that the Pythagorean Theorem can only be applied to problems involving right triangles Writing for Understanding: 1) The Wikipedia entry for Pythagoras includes the following statement: "Pythagoras believed that everything was related to mathematics and that numbers were the ultimate reality." What do you think? Write a paragraph clearly stating your views.

From 1st Term	2nd Term	PI	Integrated Algebra Term 2 Curriculum FOR FALL 2007 Prepared Exclusively by AMAPS
72	11	AA45	Lesson #11 AIM: What are some applications of the Pythagorean Theorem? Students will be able to: 1. recall and state the Pythagorean Theorem 2. investigate applications where the Pythagorean Theorem can be used to find the length of sides of a right triangle 3. describe verbal problem situations in their own words 4. create a model that can be used to represent the problem situation by using a properly labeled diagram 5. create an algebraic representation for the problem situation 6. solve verbal problems using the Pythagorean Theorem 7. express the length of the missing side in simplest radical form and to the nearest tenth as indicated in the problem statement 8. summarize the solution to a verbal problem in sentence form Writing for Understanding: 1) Discuss how the Egyptian rope stretchers, otherwise known as the royal surveyors, used the Pythagorean Theorem and knotted cords to re-establish property boundaries and measure fields. 2) Use the Internet to find out how a carpenter uses a 3-4-5 Pythagorean Triple to square up the corner of a room.
73	12	AA42	Lesson #12 AIM: What are the trigonometric ratios? Students will be able to: 1. discover that the ratio of a pair sides of a right triangle is constant for a given acute angle of the right triangle 2. define those ratios as the sine, cosine and tangent of the acute angle 3. use the scientific calculator to find functions of various angles and to find angles given trigonometric values 4. create the tangent, cosine and/or sine ratio given an appropriately labeled right triangle 5. state that the trigonometric ratios can only be applied to problems involving right triangles Writing for Understanding: 1) Given the three sides of a right triangle, for any one angle, how many different ratios can be written using any two of the sides? List them in fractional form. Which of these ratios are named sine, cosine, and tangent? (Honors Extension) Use the Internet or your textbook to find the names of the other three ratios.

From 1st Term	2nd Term	PI	Integrated Algebra Term 2 Curriculum FOR FALL 2007 Prepared Exclusively by AMAPS
74	13	AA42 AA43 AA44	Lesson #13 AIM: How do we use the trigonometric ratios to solve a right triangle problem? Students will be able to: 1. use the calculator to find values of trigonometric functions 2. apply trigonometric ratios to find, to the nearest degree, the measure of an angle of a right triangle given the lengths of two of its sides 3. apply trigonometric ratios to find the length of a side of a right triangle given the measure of an acute angle and the length of a side 4. differentiate between when to apply a trigonometric ratio and when to apply the Pythagorean Theorem Writing for Understanding: 1) Celia said to Allison: "I don't know when to use the Pythagorean Theorem and when I should be using a trigonometric ratio to answer a problem." How should Allison answer Celia?
75	14	AA42 AA43 AA44	Lesson #14 AIM: How do we apply trigonometric ratios to solve verbal problems? Students will be able to: 1. describe the problem situation in their own words 2. create a model that can be used to represent the problem situation by using a diagram 3. create an algebraic representation by selecting an appropriate trigonometric ratio for the problem situation 4. compare and contrast the trigonometric ratios to describe which ratio is best used to solve verbal problems 5. solve verbal problems using trigonometric ratios 6. explain why the Pythagorean Theorem cannot be used to solve these verbal problems 7. write the solution to the problem in a sentence Writing for Understanding: 1) Lorraine said to Rosalie: "I can't decide if I am supposed to use the sine ratio or the cosine ratio to solve this problem." How should Rosalie answer Lorraine?

From 1st Term	2nd Term	PI	Integrated Algebra Term 2 Curriculum FOR FALL 2007 Prepared Exclusively by AMAPS
76	15	AA44 AR6	Lesson #15 AIM: How do we solve trigonometric ratio problems involving the angle of elevation and the angle of depression? Students will be able to: 1. explain the criteria for selecting a trigonometric ratio or for applying the Pythagorean Theorem for finding the length of an unknown side of a right triangle 2. apply the above criteria to solving problems 3. explain what is meant by an angle of elevation and an angle of depression, and explain the relationship between them 4. describe the problem situation in their own words 5. create a model that can be used to represent the problem situation by using a diagram indicating the angle of elevation or depression 6. create an algebraic representation for the problem situation 7. solve problems involving the angle of elevation and the angle of depression 8. write the solution to the problem in a sentence Writing for Understanding: 1) Explain the relationship between the angle of elevation and the angle of depression.
77	16	AG1	Lesson #16 AIM: How can we use the coordinate plane to determine perimeters and areas of geometric figures? Students will be able to: 1. discuss why the coordinate plane is called the Cartesian coordinate plane, who is Renee Descartes, and why the need for 'order' in an ordered pair 2. describe what is meant by the x-axis, y-axis, axes, quadrants, abscissa, ordinate, coordinates of a point, "plane", and "coordinate plane" 3. draw and label axes and quadrants of a coordinate plane 4. graph an ordered pair 5. determine the coordinates of a point in the plane 6. name the abscissa and ordinate of a point in the plane 7. compute the length of a segment parallel to an axis by counting boxes or subtracting coordinate values 8. compute the perimeter of figures drawn on a coordinate plane having sides parallel to the axes 9. compute the area of figures drawn on a coordinate plane having sides parallel to the axes Writing for Understanding: 1) Renee Descartes invented the coordinate plane. Describe how this invention was used as a bridge between algebra and geometry.

From 1st Term	2nd Term	PI	Integrated Algebra Term 2 Curriculum FOR FALL 2007 Prepared Exclusively by AMAPS
78	17	AA10 AA23 AM1	Lesson #17 AIM: How do we find the solutions of a linear equation in two variables? Students will be able to: 1. discover that a linear equation in two variables has multiple solutions 2. solve for y in terms of x in the given equations 3. distinguish between the dependent and the independent variable 4. create a procedure to find the value of y corresponding to a given value for x 5. represent in tabular form some of the solutions to a linear equation in two variables 6. determine if a given ordered pair satisfies the equation 7. interpret direct variation using a linear equation and recognize direct variation given a graph 8. apply linear equations to model real-life situations 9. calculate rates using appropriate units Writing for Understanding: 1) Why is it not possible to list all of the solutions for a linear equation in two variables? What method do we use to show the solutions for a linear equation in two variables?
79	18	AG3 AG4 AG7	Lesson #18 AIM: How do we graph a linear equation in two variables? Students will be able to: 1. identify ordered pairs that satisfy a linear equation 2. define a function 3. express a linear equation using function notation, f(x) 4. graph the ordered pairs satisfying the linear equation to form the line representing the solutions to the linear equation 5. create a procedure to graph a linear equation in two variables 6. determine if a point lies on the line and give evidence supporting the decision 7. explain why the equation is called linear 8. explain what the points on the line represent 9. explain what the table of values represents 10. determine when a relation is a function, by examining ordered pairs and by inspecting graphs of relations Writing for Understanding: 1) What is the advantage of using function notation to write a linear equation in two variables? 2) Explain what a table of values represents. 3) Discuss the validity of the following statement: “A line can be drawn between any two points.” If you agree with this statement then why do we insist that students find three ordered pairs, or points, when graphing a line?

From 1st Term	2nd Term	PI	Integrated Algebra Term 2 Curriculum FOR FALL 2007 Prepared Exclusively by AMAPS
80	19	AA36 AA38	Lesson #19 AIM: How do we graph lines parallel to the axes? Students will be able to: 1. define x intercept and y intercept 2. discover that ordered pairs with a constant x-value will lie on a line that is parallel to the y-axis and that ordered pairs with a constant y-value will lie on a line that is parallel to the x-axis 3. discover a procedure for graphing linear equations for lines parallel to the axes 4. graph equations of the form x = a and y = b 5. find intercepts of lines parallel to axes 6. determine the equation of a line parallel to an axis given (1) its graph (2) a description of the line in relation to the coordinate plane Writing for Understanding: 1) Explain how to determine from the equation of a line, if the line is parallel to an axis. 2) Look up the word intercept in the dictionary. Describe how the English meaning of this word and its mathematical meaning, in the phrase x-intercept, are related.
81	20	AA32 AA33	Lesson #20 AIM: How do we find the slope of a line? Students will be able to: 1. discover the need to assign a numerical value to the 'slanted-ness' of a line 2. define slope as a number which tells how steep, and in which direction, a line is "slanted" 3. discover the relationship between a positive, negative or zero slope to the position of the line by exploring position using the graphing calculator 4. define the slope of a straight line as the "change in y over change in x" 5. express the slope as a rate of change between the independent and dependent variables 6. state and apply the formula for finding the slope of a line given the coordinates of two points 7. find the slope and y-intercept of a line from its graph Writing for Understanding: 1) When a carpenter builds a stair case, he must make a 'riser' and a 'runner' for each step in the stair case. How are these names related to the formula for the slope of a line? 2) Describe the relationship between an undefined fraction and the slope of a vertical line.

From 1st Term	2nd Term	PI	Integrated Algebra Term 2 Curriculum FOR FALL 2007 Prepared Exclusively by AMAPS
82	21	AA37 AG5	Lesson #21 AIM: How do we identify the slope and y-intercept of a straight line from its equation? Students will be able to: 1. recall the definition of the y-intercept of a line 2. write the generalized slope-intercept form of the equation of a straight line: y=mx + b 3. determine the slope and y-intercept of a line from its equation 4. write the equation of a line given its slope and y-intercept 5. state that the graph of y=mx is a direct variation and vice versa Writing for Understanding: 1) Harry joined the NY Health Club and Spa for a start up fee of $150 plus a monthly fee of $70. Describe how the $150 start up fee is like the y-intercept and the $70 fee is like the slope of a linear equation.
83	22	AG4 AG5 AA34 AA39	Lesson #22 AIM: How do we graph a linear equation using the slope-intercept method? Students will be able to: 1. recall and write the slope-intercept form of a straight line 2. use the slope and the y-intercept of a linear equation to locate points on its graph and graph the line 3. explain the procedure to graph a line using the slope and y-intercept 4. compare graphing a line using the slope-intercept method to graphing a line using a table of values 5. recall what is meant by a point being on a line as well as what it means if a point is NOT on the line 6. interpret a graph to determine the equation of the line 7. verify results by investigating with graphing calculator 8. generalize how changing the coefficients of a linear equation affects its graph Writing for Understanding: 1) When graphing a linear equation, how do you decide which method to use: "table of values" method or the "slope-intercept" method?

From 1st Term	2nd Term	PI	Integrated Algebra Term 2 Curriculum FOR FALL 2007 Prepared Exclusively by AMAPS
84	23	AR7 AA32	Lesson #23 AIM: How do we use a graph to express a linear relationship with a real-world context? Students will be able to: 1. given an in-context graph where the x and y variable represent quantities such as months, cost, etc., interpret the real world meaning of the slope and y-intercept 2. given two quantities that have a linear relationship (such as cost and time), write an equation relating these quantities and represent the relationship using a linear graph 3. interpret real-world applications by creating the graph of the linear relationship 4. summarize the real-world interpretations by writing complete sentences Writing for Understanding: 1) Describe the meaning of the slope and y-intercept of a graph where x represents time and y represents distance. 2) A packaging machine wraps 150 candy bars every minute during its operating time. Describe how this relationship could be represented as a linear equation in two variables. 3) Record the heights and foot lengths, in inches, of all the members of your family. Determine whether or not this is a linear relationship by letting x represent the foot lengths and y represent the heights. Describe your results.
85	24	AA38 AA36	Lesson #24 AIM: What is the relationship between the slopes of parallel lines? Students will be able to: 1. discover that parallel lines have equal slopes and the converse 2. justify that vertical lines are parallel even though their slopes are undefined 3. given the equation of two lines, determine if they are parallel or not 4. identify the slopes of lines parallel to given lines 5. write the equation of a line parallel to the x- or y-axis 6. verify results by investigating with graphing calculator 7. write the equation of a line parallel to a given line through a given point Writing for Understanding: 1) Investigate the statement: “Every pair of parallel lines must lie in the same plane.” 2) You are a Crime Scene Investigator (CSI) testifying at a trial. You must prove to the jury that your measurements of the slopes of two lines show the lines are parallel in order to win the case. What would you say to the jury?

From 1st Term	2nd Term	PI	Integrated Algebra Term 2 Curriculum FOR FALL 2007 Prepared Exclusively by AMAPS
86	25	AA34 AA35	Lesson #25 AIM: How do we write an equation of a line? Students will be able to: 1. create the equation of a line given its slope and y-intercept 2. create an equation a line given its slope and the coordinate of one point on the line 3. create an equation of a line given the coordinates of two points on the line 4. verify results by investigating with graphing calculator Writing for Understanding: 1) Describe the procedure for writing the equation of a line passing through two given points.
87	26	AG4 AG5	Lesson #26 AIM: How do we graph the absolute value function: $y = \lvert x + a \rvert + b$? Students will be able to: 1. recall the definition of absolute value 2. express absolute value as an equation in two variables 3. create a table of values and use it to graph the absolute value function 4. identify the absolute value function as a function, by examining ordered pairs and by inspecting its graph 5. investigate and generalize how changing the coefficients of the absolute value function affects its graph Writing for Understanding: 1. Connie said to Flavia that an absolute value graph looks just like the graph of a linear equation with the negative side folded up. Comment on what Connie is saying to Flavia.

From 1st Term	2nd Term	PI	Integrated Algebra Term 2 Curriculum FOR FALL 2007 Prepared Exclusively by AMAPS
88	27	AG7 AA10	Lesson #27 AIM: How do we find a common solution to a system of two linear equations, with rational coefficients, graphically? Students will be able to: 1. explore the possibility of locating a common solution to a pair of linear equations by trial and error 2. bridge previously learned concepts together to create an efficient method of locating the common solution through graphing 3. graph the equations of two linear equations on the same axes 4. justify that the common solution is given by the coordinates of the points of intersection of the two lines 5. verify that the coordinates of the point of intersection is a common solution by checking that they satisfy both equations 6. verify results by investigating with graphing calculator and using the intersect function Writing for Understanding: 1) Enric's teacher asked him to find the common solution to a system of equations, but when he graphed the system he said that there were no solutions. How could this have happened? 2) Describe how a graph of a system of linear equations could have an infinite number of solutions. 3) Use the Internet to find the meaning of a system of linear equations that are (a) consistent (b) dependent (c) inconsistent.
89	28	AA10	Lesson #28 AIM: How can we use substitution to solve a system of linear equations, with integral coefficients, algebraically? Students will be able to: 1. recall what is meant by solving a system of linear equations 2. explain the procedure for solving a system of linear equations using substitution 3. solve systems of linear equations using substitution 4. check solution to the system in both equations 5. identify the connection between solving a system graphically and solving it algebraically Writing for Understanding: 1) Compare and contrast solving a system of equations graphically to solving the system of equations algebraically. 2) Which method of solving a system of equations, algebraically or graphically, do you prefer to use? State why you prefer it?

From 1st Term	2nd Term	PI	Integrated Algebra Term 2 Curriculum FOR FALL 2007 Prepared Exclusively by AMAPS
90	29	AA10	Lesson #29 AIM: How can we use addition to solve a system of linear equations, with integral coefficients, algebraically? Students will be able to: 1. recall what is meant by solving a system of linear equations 2. discover the procedure for solving a system of linear equations in two variables using addition/subtraction, including multiplication of one equation before addition/subtraction 3. solve systems of linear equations using addition/subtraction and addition with multiplication 4. compare and contrast the substitution method with the addition/subtraction method 5. check the solution to the system in both equations 6. evaluate systems of linear equations to determine the circumstances, if any, under which substitution or addition/subtraction is *more* appropriate, and justify the conclusion Writing for Understanding: 1) Explain how to determine when multiplication is required to solve a system of equations with the addition method. 2) Compare and contrast the substitution method with the addition method of solving a system of equations algebraically. 3) Rhonda asked Amar: "How do you decide which method to use to solve a system of linear equations?" How should Amar answer Rhonda?
91	30	AA10	Lesson #30 AIM: How can we solve a *more difficult* system of linear equations algebraically? Students will be able to: 1. apply the procedure for solving a system of linear equations in two variables using addition or subtraction with multiplication to systems in which both equations must be multiplied before the addition or subtraction 2. apply the procedure for solving a system of linear equations in two variables using substitution in which *neither* equation is given in terms of one variable 3. evaluate systems of linear equations to determine the circumstances, if any, under which the method of substitution or addition/subtraction is *more* appropriate and justify the conclusion 4. apply the selected method to find the common solution 5. check the solution to the system in both equations Writing for Understanding: 1) Explain how to determine which algebraic method of solving a system of linear equations is more appropriate to use.

From 1st Term	2nd Term	PI	Integrated Algebra Term 2 Curriculum FOR FALL 2007 Prepared Exclusively by AMAPS
92&93	31&32	AA7 AA10	Lesson #31& #32 AIM: How can we solve verbal problems that lead to solving a system of linear equations algebraically? Two Days Students will be able to: 1. describe the problem situation in their own words 2. create a model that can be used to represent the problem situation by using a diagram, charting, or a graphic organizer 3. create a system of linear equations to represent the problem situation 4. solve the system of linear equations 5. solve and write the solution to the problem 6. check the solution based upon the reading of the problem 7. summarize the solution to the verbal problem in writing Writing for Understanding: 1) Old MacDonald had a farm and a son named, Ronald. Ronald needed to buy vitamins for the sheep and the chickens on the farm. His dad said, "Son, all together there are 17 heads and 58 legs on our chickens and sheep." Describe how Ronald can use this information to figure out how many chickens and how many sheep are on the farm.

From 1st Term	2nd Term	PI	Integrated Algebra Term 2 Curriculum FOR FALL 2007 Prepared Exclusively by AMAPS
94	33	AG6	Lesson #33 AIM: How do we graph a linear inequality? Students will be able to: 1. explore the difference between a linear inequality in two variables and a linear equation in two variables 2. connect symbols used when graphing on a number line (open or closed circles) to determining whether or not to use a solid or dashed line as the boundary line for the inequality graph 3. graph the solution set of the related *linear equation* to determine the boundary line for the solution 4. determine whether a given ordered pair is a solution to an inequality 5. specify that the solution to an inequality is a region 6. develop the procedure for graphing a linear inequality 7. graph the solution set of a linear inequality in two variables 8. state conditions under which points on the boundary line will be solutions to the given inequality and state how this is indicated 9. check one solution in the original inequality 10. indicate where on the graph the solution set lies 11. verify results by investigating with graphing calculator Writing for Understanding: 1) In the game of tennis, when the tennis ball hits the boundary line the ball is considered still in play. In the game of football the boundary line it is out of play. When graphing a linear inequality, how do we show when the points on the boundary line are included in the solution set and when they are not included in the solution set? 2) Explain the similarities and differences between graphing a linear equation and graphing a linear inequality.

From 1st Term	2nd Term	PI	Integrated Algebra Term 2 Curriculum FOR FALL 2007 Prepared Exclusively by AMAPS
95	34	AG6 AG7 AA40	Lesson #34 AIM: How can we solve a system of linear inequalities graphically? Students will be able to: 1. investigate what is meant by the solution to a system of linear inequalities 2. explain what a point on a line represents 3. explain what a point inside a shaded region represents 4. develop the procedure for solving a system of linear inequalities graphically 5. represent graphically the solution to a system of linear inequalities 6. verify results by investigating with a graphing calculator 7. find and check ordered pairs in the solution set of the inequalities 8. compare and contrast the solution of a system of linear inequalities with the solution of a system of linear equations 9. verify results by investigating with a graphing calculator Writing for Understanding: 1) John Venn devised a system that uses circles to compare elements in different sets called Venn Diagrams. Look up Venn Diagrams on the internet or in your textbook and compare and contrast the graph of a system of linear inequalities to a Venn diagram. 2) The cost of making an MP3 player is represented C(x) and the revenue earned from selling the MP3 players is represented by R(x) where x is the number of MP3 players made and sold. The profit is the difference between the revenue and the cost. Describe the mathematics needed to compute the breakeven point. Where on the graph of the system C(x) and R(x) would you find the areas of profit and loss? 3) Explain the meaning of the double-shaded region.

From 1st Term	2nd Term	PI	Integrated Algebra Term 2 Curriculum FOR FALL 2007 Prepared Exclusively by AMAPS
96	35	AA41 AG4 AG8 AG10	Lesson #35 AIM: How do we graph a quadratic equation in two variables? Students will be able to: 1. explore the graph of a quadratic equation either manually by creating a table of values or by using a graphing calculator to establish patterns 2. define terms: vertex, turning point, axis of symmetry, x- and y-intercepts 3. create the graph of a parabola by hand given its equation 4. verify results by investigating with graphing calculator 5. identify the form of the equation of a parabola 6. explain that the graph of the parabola represents the solution set of the quadratic equation $y = ax^2 + bx + c$ 7. find the roots of a parabolic function graphically (integral solutions only) 8. determine whether or not a parabola is a function, by examining ordered pairs and by inspecting its graph Writing for Understanding: 1) Write a recipe that lists the steps used to graph $y = ax^2 + bx + c$, include an 'ingredients list' and a picture of the finished 'dish'. 2) A toy rocket is shot vertically up into the air. The height of the rocket is modeled by the equation $y=2+24x-4.9x^2$. Describe how this equation can be used to determine the maximum height that the toy rocket attains.
97	36	AG4 AG8 AG10	Lesson #36 AIM: How do we graph a quadratic equation in two variables? Students will be able to: 1. graph a parabola using a table 2. recall what is meant by the axis of symmetry of a parabola 3. discover a pattern that can be used to create the equation of the axis of symmetry of a parabola 4. recall what is meant by the turning point or vertex of a parabola 5. discover a pattern that can be used to determine the coordinates of the turning point 6. discover a pattern that can be used to determine when the parabola opens up and when it opens down 7. use the discovered patterns to determine the 'characteristics' of a given parabola given its equation 8. determine the vertex, axis of symmetry and zeros of a parabola from its graph (integral values only) 9. determine whether or not a parabola is a function, by examining ordered pairs and by inspecting its graph Writing for Understanding: 1) You plan to attack the evil King's castle by using your medieval army's technological skills at sending projectiles over the castle's 25 foot wall. The army has set their cannon so that the height of the projectile is represented by the equation: $h = 3 + 20t - 4.9t^2$. Write an ending for this story. Do you defeat the evil King or not? Justify. 2) What is the relationship between the turning point and the axis of symmetry of a parabola?

From 1st Term	2nd Term	PI	Integrated Algebra Term 2 Curriculum FOR FALL 2007 Prepared Exclusively by AMAPS
98	37	AG9	Lesson #37 AIM: How can we graphically solve a system of equations involving a parabola and a straight line? Students will be able to: 1. define a quadratic-linear system 2. discover the ways that a line and a parabola could intersect 3. review the procedure for graphing a parabola 4. review the procedure for graphing a line 5. determine the coordinates of the point(s) of intersection, if any, of the two graphs 6. explain the procedure for checking the solutions 7. verify results by investigating with graphing calculator and using the intersect function Writing for Understanding: 1) Analyze the ways that a straight line and a parabola can intersect. 2) Explain why the point(s) of intersection represent the solution set to the system of equations.
99	38	AA11	Lesson #38 AIM: How can we solve a quadratic-linear system algebraically for systems with integral solutions only? Students will be able to: 1. recall and state the procedure for solving a system of linear equations using substitution 2. bridge the above procedure into a procedure for solving a quadratic-linear system 3. describe a procedure for solving the linear equation for one variable and substituting it into the quadratic equation 4. transform the quadratic equation into standard form 5. solve the resulting quadratic equation 6. explore how to find corresponding values of the other variable and explain the advantages of using the linear equation to do this 7. write the solutions as ordered pairs 8. explain the procedure used to solve a quadratic-linear system algebraically 9. identify the connection between solving a system graphically and solving it algebraically 10. check each solution in both of the original equations Writing for Understanding: 1) How is the procedure for solving a quadratic-linear system like the procedure for solving a linear system of equations? 2) Explain what is meant by solving a system of equations.

From 1st Term	2nd Term	PI	Integrated Algebra Term 2 Curriculum FOR FALL 2007 Prepared Exclusively by AMAPS
100	39	AA11	Lesson #39 AIM: What is an exponential function? Students will be able to: 1. sketch the graph of $y = a^x$, where a>0, and a is not equal to 1 2. compare exponential graphs with linear or quadratic graphs 3. define what is meant by the exponential function 4. identify the exponential function as a function, by examining ordered pairs and by inspecting its graph Writing for Understanding: 1) Compare the growth of an exponential function to the growth of a quadratic function as the value of x increases from zero to 10. 2) A king had a servant who invented the game of chess. The king liked the game a lot and asked to buy it from the servant. They agreed on the following price: one grain of wheat for the first box on the 64-box chess board, two grains of wheat for the second box, four grains of wheat for the third box, and continuing to double the number of grains of wheat for each of the boxes on the chess board. The King, thinking he had a great deal, agreed. However, as the king began to make payment he became angry with the servant and had the servant executed. Explain the mathematics of the deal the servant made with the king and tell why you think the king executed the servant. Support your answer with evidence.
101	40	AA9	Lesson #40 AIM: How do we use an exponential function to solve verbal problems? Students will be able to: 1. to read the problem 2. describe the problem situation in their own words 3. create a model that can be used to represent the problem situation by using a diagram, charting, manipulative tools, and/or a graphic organizer 4. interpret the model into an algebraic representation for the situation (the legend) 5. create an equation that may be used to solve a given verbal problem 6. identify, in writing, the meaning of the variable used in the equation 7. solve the equation using previously learned techniques 8. state and justify the complete solution by referring back to the original conditions of the verbal situation Writing for Understanding 1) Radioactive iodine is a by-product of some types of nuclear reactors. Its half-life is 60 days. Suppose a nuclear accident happens and a fixed amount of the radioactive iodine is given off. Discuss the amount of radioactive iodine that will be present during the next 180 days using the half-life as intervals for your discussion. What graphical model will best project the amount after 320 days?

From 1st Term	2nd Term	PI	Integrated Algebra Term 2 Curriculum FOR FALL 2007 Prepared Exclusively by AMAPS
102	41	AA31 ACM2 ARP11 AA30	Lesson #41 AIM: How can we use a Venn diagram to solve problems? Students will be able to: 1. define the universe, set, and complement of a given set 2. create a Venn diagram for different sets 3. define and illustrate disjunction 4. define and illustrate conjunction 5. solve problems using Venn diagrams 6. explain the historical development of Venn diagrams; identify John Venn as the inventor of Venn diagrams Writing for Understanding: 1) Discuss, in writing, how a Venn diagram creates a picture that shows the connections between two or more sets of elements.
103	42	AN7 AS18 AS19 AS20 AS21 AS22	Lesson #42 AIM: How can we apply probability to problems involving spinners, dice, coins or cards? Students will be able to: 1. explain the meaning of the probability of an event which equals 0 or 1 or a fraction between 0 and 1 2. define probability of certain and impossible events 3. read and use the expression P(A) to represent the probability of event A 4. state and apply the fundamental probability formula $P(E) = \frac{n(E)}{n(S)}$ 5. determine the probability of each outcome when using spinners, cards, dice or coins, hitting a bull's eye on a dartboard 6. explain and apply the meaning of equally likely events 7. explain the meaning of bias, as in a biased coin or biased die 8. state that the sum of the probabilities in a given experiment is always 1 9. determine the probability of "not A" 10. state and apply the meaning of complementary events to their probabilities Writing for Understanding: 1) Explain why the sum of the probabilities of an event is one. 2) Explain, in words, how to find P(A) if P(~A) is known. 3) How does bias influence the number of successful outcomes for an event?

From 1st Term	2nd Term	PI	Integrated Algebra Term 2 Curriculum FOR FALL 2007 Prepared Exclusively by AMAPS
104	43	AN7	Lesson #43 AIM: How can we use tree diagrams and the counting principle to find probabilities of compound events? Students will be able to: 1. use tree diagrams to determine the sample space for compound events such as rolling a die and tossing a coin 2. list the outcomes in a sample space indicated by a tree diagram 3. determine probabilities involved in compound events 4. state the counting principle 5. apply the counting principle to determine the number of outcomes in a sample space 6. use the counting principle to determine the probability of compound events without drawing a tree diagram 7. apply the counting principle to solve problems such as the number of possible license plates, phone numbers, 3-digit numbers, with and without repetition Writing for Understanding: 1) Danny explained to Jim that counting the branches on a tree diagram will tell how many ways that a many-staged event can happen. How can the tree diagram be used to calculate the probability of an event? 2) Explain what a tree diagram represents.
105	44	AS18 AS19	Lesson #44 AIM: How do we find conditional probability? Students will be able to: 1. define conditional probability 2. state the notation used for conditional probability: P(A/B) 3. use conditional probability to find probabilities in a finite sample space 4. compute conditional probability in real-life situations 5. determine empirical probabilities based on specific sample data Writing for Understanding: 1. Compare and contrast conditional probability with simple probability.

From 1st Term	2nd Term	PI	Integrated Algebra Term 2 Curriculum FOR FALL 2007 Prepared Exclusively by AMAPS
106	45	AN7 AS23	Lesson #45 AIM: How can we find the probability of "A or B" and "A and B"? Students will be able to: 1. use tree diagrams to discover the probability of a compound event connected by "and" 2. state and apply the multiplication rule to find the probability of compound events connected by "and" for independent events: P(A and B) = P(A) · P(B) 3. compute P(A and B) by using a Venn diagram to find the number of events in the intersection of event sets A and B 4. compute P(A or B) by adding P(A) and P(B) when events A and B are mutually exclusive 5. compute P(A or B) using P(A or B) = P(A) + P(B) – P(A and B), when A and B are not mutually exclusive events Writing for Understanding: 1) Helen stated that when we have more than one way for an event to succeed, we add the probabilities of the ways. She also said that if our event is made up of two stages we must multiply their probabilities in order to find the probability of the event. Carole was confused by these statements. Write Carole a note to help her to understand this difference. 2) Marcus computed the probability of selecting a card that is either a King or a Heart as 17 out of 52. He proved it by drawing a Venn diagram. However, Gary drew a Venn diagram to show Marcus that the answer was actually 16 out of 52. What do their diagrams look like, who was correct and why? 3) Explain why P(A or B) does not always equal P(A) + P(B).
107	46	AN7 AS23	Lesson #46 AIM: How do we find probabilities sampling with and without replacement of objects? Students will be able to: 1. create a tree diagram to represent the sample space when sampling with and without replacement 2. determine probability involving sampling "with" and "without" replacement using a tree diagram by multiplying probabilities Writing for Understanding: 1) Explain the similarities and differences between P(event) involving replacement and P(event) involving non-replacement of objects. 2) Describe a real-life probability situation in which objects selected cannot be replaced.

From 1st Term	2nd Term	PI	Integrated Algebra Term 2 Curriculum FOR FALL 2007 Prepared Exclusively by AMAPS
106	47	AN8	Lesson #47 AIM: What do we mean by permutations? Students will be able to: 1. apply the meaning of factorial to arithmetic examples 2. define factorial (!) to calculate the number of arrangements of n things taken n at a time 3. define permutation 4. compute the number of permutations of n things taken n at a time (i.e., nPn = n!) Writing for Understanding: 1) Identify two real-world situations: one situation in which the order that items are selected matters and one in which the order of selection does not matter. Support your choices with appropriate evidence. 2) Create a problem that should be solved by using the permutation formula.
107	48	AN8	Lesson #48 AIM: How can we count the number of possible arrangements of a set of objects, which are not all different, in a particular order? Students will be able to: 1. derive a formula for the number of permutations of n objects with r of them identical 2. apply the formula from (1) 3. derive and apply a formula for the number of permutations of n objects, with r_1 identical, r_2 identical, and so on Writing for Understanding: 1) Explain the difference between finding the permutation of objects with or without repetition.
108	49	AS3	Lesson #49 Aim: How do we categorize data? Students will be able to: 1. define statistics as a discipline dealing with collection, organization and interpretation of related pieces of numerical information called data 2. explore methods in which data can be collected 3. define qualitative variables and quantitative variables 4. investigate real world problems where a statistical study may be helpful 5. explore real world statistical studies to determine if the data is qualitative or quantitative 6. compare and contrast data that is considered qualitative to data that is considered quantitative Writing for Understanding 1) Data was collected in a super market by offering samples of potato chips to customers as they entered the store. The customers were asked to rate the potato chips on a scale of 0 to 5, 0 meant inedible and 5 meant excellent taste. Would this data be characterized as qualitative or quantitative? Support your answer with evidence.

From 1st Term	2nd Term	PI	Integrated Algebra Term 2 Curriculum FOR FALL 2007 Prepared Exclusively by AMAPS
109	50	AS3	Lesson #50 Aim: What are the various sampling techniques? Students will be able to: 1. explain what is meant by "sampling" 2. evaluate the importance of choosing a representative sample 3. explore the various techniques of sampling 4. define a simple random sample (SRS), voluntary response sample, systematic sample, convenience sample, stratified sample 5. explain, both orally and in writing, the importance of random samples, 6. describe the various sampling methods in their own words 7. create an original statistical study with an appropriate sampling technique Writing for Understanding: 1) Nielsen ratings are used by the television industry to determine how many households in America watched a particular TV show. What role does statistical sampling play in making a statement about ALL the households in America?
110	51	AS3 AS15	Lesson #51 Aim: How do we determine when collected data or displayed data may be biased? Students will be able to: 1. define bias and describe the effect of bias on the outcome of a study 2. identify the common sampling techniques that often lead to flawed conclusions 3. explore ways to re-design an experimental in order to correct for possible bias Writing for Understanding: 1) One morning, a national radio station ran a survey to answer the question: Do you think that Elvis is still alive? Listeners were asked to answer the poll by calling the radio station. The results of the poll indicated that 62% of the country believed that Elvis was still alive. Consider the sampling technique used by the radio station and comment on the validity of the results of this poll.

From 1st Term	2nd Term	PI	Integrated Algebra Term 2 Curriculum FOR FALL 2007 Prepared Exclusively by AMAPS
111	52	AS4	Lesson #52 Aim: How do we compute the range and measures of central tendency for a given set of data? Students will be able to: 1. define 'measure of central tendency' 2. define the mean, median and mode of a set of data 3. explain why mean, median, and mode are measures of central tendency 4. define 'measure of dispersion' 5. define the range of a set of data 6. compute the mean, median, mode, and range of a set of data 7. investigate the need for measures of central tendency and a measure of dispersion Writing for Understanding: 1) Justify, in writing, the need to have three different measures of central tendency. 2) Two students in Mr. Wang's math class have an average of 75%. The range of scores for the first student is 33 and the range of scores for the second student is 8. Using this information, describe in writing, the performance of these two students in Mr. Wang's math class.
112	53	AS16	Lesson #53 Aim: How does a linear transformation of one-variable data affect the data's mean, median, mode, and range? Students will be able to: 1. interpret what mean, median, mode, and range tell about a data set 2. explain how mean, median, mode and range can be affected by extreme data values 3. explain the effect of a linear transformation of one-variable data on the mean, median, mode, and the range 4. explore real world examples of linear transformations of one-variable data and the effect on the data's mean, median, mode and range Writing for Understanding: 1) Ms. Jones gave an exam that was too difficult for the students. The class' mean score was a 68%, the median was 57% and the mode was 55%. She decided to add a ten point curve to each student's exam score. Describe what the curve will do to the mean, median, and the mode for this set of data.

From 1st Term	2nd Term	PI	Integrated Algebra Term 2 Curriculum FOR FALL 2007 Prepared Exclusively by AMAPS
113	54	AS4 AS5	Lesson #54 Aim: How do we compare and contrast the appropriateness of different measures of central tendency for a given set of data? Students will be able to: 1. compute the mean, median, and mode for real world data 2. evaluate which measure of central tendency best represents the data of a given data set 3. select the measure of central tendency that is most representative of a given data set, and justify why this measure if central tendency was selected Writing for Understanding: 1) A company has ten employees, two managers and eight sales representatives. Each manager earns $73,000, while each sales representative earns $28,000. An editorial in the local newspaper reported that the mean salary at the company was $37,000 and so the workers were not entitled to a salary increase. Support or reject the conclusion made in the editorial by citing evidence for your conclusion.
114	55	AS5 AS6	Lesson #55 Aim: How can we use the five-statistical summary to construct a box-and-whisker plot? Students will be able to: 1. describe a box-and-whisker plot 2. create a box-and-whisker plot from a given data set (manually and with a graphing calculator) 3. use a box-and-whisker plot to determine the median, the upper and lower quartile, and the range of a given data set 4. use a box-and-whisker plot to compare two or more data sets 5. interpret the results of the comparison of two or more data sets 6. verify a box-and-whisker plot and the five-statistical summary using the graphing calculator Writing for Understanding: 1) The manager at the local McDonald's Restaurant investigated customer wait time at the drive up window by keeping a log, in minutes, of the actual wait time. Explain how the manager could use this data to make a box-and-whisker plot. Describe the kind of information that could learned by examining the results of this plot.

From 1st Term	2nd Term	PI	Integrated Algebra Term 2 Curriculum FOR FALL 2007 Prepared Exclusively by AMAPS
115	56	AS5	Lesson #56 Aim: How can we construct frequency tables for intervals of length one and for intervals other than length one? Students will be able to: 1. create a frequency table with intervals of length one 2. use the frequency table to compute the three measures of central tendency 3. create frequency tables for intervals other than length one 4. obtain the modal interval and the interval containing the median from the frequency table 5. define the 'class mark' of an interval whose length is greater than one 6. use the class mark to compute the mean of the data listed in the frequency chart Writing for Understanding: 1) How can we use a frequency table to avoid re-writing the data in size order, to determine the median of a set of data? 2) Why is it sometimes necessary to create a frequency table using bins (intervals other than length one) to record the frequency of data points? How does binned data create a problem for calculating the mean of the data set?
116	57	AS5 AS9	Lesson #57 Aim: How do we organize data into a histogram? Students will be able to: 1. explore the similarities and differences between a histogram and a bar graph 2. explain what the bars of the histogram show 3. read and interpret histograms 4. construct a frequency histogram based on a set of data from a table, by hand and on the graphing calculator Writing for Understanding: 1) A histogram is created *without* spaces between the bars, yet a bar graph is created *with* spaces between the bars. Describe the reason for this difference in these graphs. 2) Use the Internet to learn how to make a stem-and-leaf plot. Describe how it is made and compare it to a histogram.

From 1st Term	2nd Term	PI	Integrated Algebra Term 2 Curriculum FOR FALL 2007 Prepared Exclusively by AMAPS
117	58	AS5	Lesson #58 Aim: How do we organize data into a cumulative frequency histogram? Students will be able to: 1. interpret the meaning of *cumulative* as it applies to creating a histogram by making comparisons to real life situations that involve the concept of *cumulative* 2. define cumulative frequency 3. determine cumulative frequency by interpreting a table of grouped data 4. construct a cumulative frequency histogram 5. explain how a cumulative frequency histogram differs from a histogram 6. explain the circumstances under which using a cumulative frequency histogram is more appropriate than using a frequency histogram to represent a set of data Writing for Understanding: 1) Describe a real-life situation in which a cumulative frequency histogram is a more appropriate way to display a data set than a frequency histogram.
118	59	AS9 AS11	Lesson #59 Aim: How can we use a cumulative frequency histogram to determine information on percentile scores, quartile scores, and the median? Students will be able to: 1. recall and state the definition of cumulative frequency 2. define percentile, quartile, and cumulative relative frequency 3. investigate a cumulative frequency histogram in order to use it to provide quartile, percentile scores and the median score 4. interpret real-world data by evaluating percentile scores, quartile scores and the median scores from a cumulative frequency histogram Writing for Understanding: 1) Paul scored a 93% on his last math exam and he was ranked in the 93rd percentile on his Math SAT score. How are these scores different from each other?

From 1st Term	2nd Term	PI	Integrated Algebra Term 2 Curriculum FOR FALL 2007 Prepared Exclusively by AMAPS
119	60	AS1 AS2 AS7 AS12	Lesson #60 Aim: How do we create a scatter plot of bivariate data? Students will be able to: 1. define univariate and bivariate data 2. identify the independent variable and the dependent variable from a scatter plot 3. define and draw a scatter plot for a given set of data, both by hand and using a graphing calculator 4. interpret scatter plots Writing for Understanding: 1) Explain how the prefixes, 'uni-'and 'bi-' help us to understand the difference between univariate and bivariate data. 2) How does a scatter plot indicate data points that are not related to each other? How would it indicate data that is related?
120	61	AS13 AS14	Lesson #61 Aim: What is the difference between a linear correlation and causation? Students will be able to: 1. investigate the meaning of a linear correlation 2. explain the difference between correlation and causation 3. identify variables that have a correlation but not a causal relationship 4. explore and interpret real world situations and/or statistical studies in which the variables correlate but may or may not have a causal relationship Writing for Understanding: 1) Mona was given the following information: "In January, the number of cases of the flu increase and so does the number of pot holes in the city streets." Mona then concluded that *the flu causes pot holes*. Help Mona understand the difference between correlation and causation by writing her a note explaining it to her.

From 1st Term	2nd Term	PI	Integrated Algebra Term 2 Curriculum FOR FALL 2007 Prepared Exclusively by AMAPS
121	62	AS8	Lesson #62 Aim: For a given set of data, how do we manually construct a reasonable line of best fit and determine the equation of that line? Students will be able to: 1. define and draw a scatter plot for a set of data 2. define the line of best fit 3. state the properties of the line of best fit 4. manually construct a reasonable line of best fit for a scatter plot 5. determine the equation of the line of best fit 6. use the graphing calculator to verify the scatter plot and equation of the line of best fit Writing for Understanding: 1) Given the statement: "The line of best fit is the line through which the greatest number of data points will pass." Tell whether or not you think the statement is true or false, and support your answer with evidence.
122	63	AS17	Lesson #63 Aim: How can we use the line of best fit to predict unknown values? Students will be able to: 1. define and draw a scatter plot for a set of data 2. define the line of best fit 3. state the properties of the line of best fit 4. manually construct a reasonable line of best fit for a scatter plot 5. determine the equation of the line of best fit 6. use the equation found to predict the results for data points for which we do not have actual measurements 7. use the graphing calculator to verify results Writing for Understanding: 1) Doctors chart the monthly growth of newborn infants for the first year of their lives. This data can be used to find the line of best fit for the height of an individual child. Explain whether or not this data could be accurately used to predict the height of that particular child when he is five years old.

From 1st Term	2nd Term	PI	Integrated Algebra Term 2 Curriculum FOR FALL 2007 Prepared Exclusively by AMAPS
123	64	AS10	Lesson #64 Aim: How do we evaluate published reports and graphs that are based on data? Students will be able to: 1. read published reports containing data and put the report into their own words 2. evaluate published reports and graphs based on data by considering experimental design and appropriateness of the data analysis Writing for Understanding: 1) Use the Internet to find a statistical report on a topic of interest to you. Print out a copy of the report, read it carefully, summarize it in your own words, and state your opinion of the results given in the report.