SpiralEd Solutions

Algebra I   Spirals

Tracking Document

A.2(A)	determine the domain and range of a linear function in mathematical problems; determine reasonable domain and range values for real-world situations, both continuous and discrete; and represent domain and range using inequalities;					
		S25Q2	S25Q3	S26Q2	S26Q3	S29Q2
		S33Q2	S48Q2	S59Q2	S61Q2	S72Q1
		S92Q3	S110Q1			
A.2(B)	write linear equations in two variables in various forms, including $y = mx + b$, $Ax + By = C$, and $y - y1 = m(x - x1)$, given one point and the slope and given two points;	S17Q1	S17Q3	S18Q1	S19Q1	S19Q2
		S22Q1	S44Q1	S94Q1		
A.2(C)	write linear equations in two variables given a table of values, a graph, and a verbal description;					
		S18Q3	S19Q3	S20Q1	S20Q3	S21Q1
		S21Q2	S30Q1	S48Q1	S69Q1	S98Q1
A.2(D)	write and solve equations involving direct variation;					
		S15Q2	S15Q3	S16Q1	S20Q2	S35Q3
		S101Q1				
A.2(E)	write the equation of a line that contains a given point and is parallel to a given line;					
		S22Q2	S22Q3	S23Q1	S53Q1	S94Q2
A.2(F)	write the equation of a line that contains a given point and is perpendicular to a given line;					
		S23Q3	S24Q1	S24Q3	S52Q1	S91Q2
A.2(G)	write an equation of a line that is parallel or perpendicular to the X or Y axis and determine whether the slope of the line is zero or undefined;					
		S24Q2	S25Q1	S26Q1	S70Q1	S91Q1

A.2(H)	write linear inequalities in two variables given a table of values, a graph, and a verbal description; and					
		S37Q3	S38Q1	S38Q2	S56Q2	S60Q1
		S91Q3				
A.2(I)	write systems of two linear equations given a table of values, a graph, and a verbal description.					
		S39Q3	S40Q2	S40Q3	S41Q3	S42Q1
		S43Q3	S51Q2	S57Q3	S66Q3	S71Q1
		S78Q3	S93Q3	S99Q1	S113Q1	S115Q3
A.3(A)	determine the slope of a line given a table of values, a graph, two points on the line, and an equation written in various forms, including $y = mx + b$, $Ax + By = C$, and $y - y_1 = m(x - x_1)$;					
		S12Q3	S13Q2	S13Q3	S27Q2	S43Q1
		S55Q3	S63Q1	S75Q3	S97Q3	
A.3(B)	calculate the rate of change of a linear function represented tabularly, graphically, or algebraically in context of mathematical and real-world problems;					
		S14Q1	S14Q2	S14Q3	S15Q1	S16Q2
		S21Q3	S28Q3	S34Q1	S54Q1	S64Q1
		S100Q3				
A.3(C)	graph linear functions on the coordinate plane and identify key features, including x-intercept, y-intercept, zeros, and slope, in mathematical and real-world problems;					
		S10Q3	S11Q1	S11Q2	S11Q3	S12Q1
		S12Q2	S28Q1	S32Q3	S36Q2	S40Q1
		S47Q2	S60Q2	S67Q2	S85Q1	S95Q2

A.3(D)	graph the solution set of linear inequalities in two variables on the coordinate plane;									
		S35Q2		S36Q1		S36Q3		S37Q1		S37Q2
		S41Q2		S44Q3		S66Q1		S99Q2		S108Q2
A.3(E)	determine the effects on the graph of the parent function $f(x) = x$ when $f(x)$ is replaced by $af(x)$, $f(x) + d$, $f(x - c)$, $f(bx)$ for specific values of a, b, c, and d;									
		S27Q3		S29Q1		S29Q3		S31Q1		S85Q2
A.3(F)	graph systems of two linear equations in two variables on the coordinate plane and determine the solutions if they exist;									
		S38Q3		S39Q1		S39Q2		S46Q2		S92Q1
A.3(G)	estimate graphically the solutions to systems of two linear equations with two variables in real-world problems; and									
		S43Q2		S43Q3		S44Q2		S49Q3		S94Q3
A.3(H)	estimate graphically the solutions to systems of two linear equations with two variables in real-world problems; and									
		S46Q3		S47Q1		S47Q3		S70Q2		S106Q1
A.4(A)	calculate, using technology, the correlation coefficient between two quantitative variables and interpret this quantity as a measure of the strength of the linear association;									
		S81Q3		S31Q2		S32Q1		S51Q3		S81Q3
A.4(B)	compare and contrast association and causation in real-world problems; and									
		S32Q2		S33Q1		S33Q3		S49Q1		S85Q3

A.4(C)	write, with and without technology, linear functions that provide a reasonable fit to data to estimate solutions and make predictions for real-world problems.					
		S30Q2	S30Q3	S31Q3	S41Q1	S93Q1
A.5(A)	solve linear equations in one variable, including those for which the application of the distributive property is necessary and for which variables are included on both sides;					
		S3Q3	S4Q2	S4Q3	S5Q1	S5Q2
		S6Q1	S6Q2	S6Q3	S7Q1	S8Q2
		S13Q1	S16Q3			
A.5(B)	solve linear inequalities in one variable, including those for which the application of the distributive property is necessary and for which variables are included on both sides; and					
		S34Q2	S34Q3	S35Q1	S42Q2	S62Q1
A.5(C)	solve systems of two linear equations with two variables for mathematical and real-world problems.					
		S45Q1	S45Q2	S45Q3	S46Q1	S49Q2
		S63Q2	S71Q3	S96Q2	S101Q3	S117Q2
A.6(A)	determine the domain and range of quadratic functions and represent the domain and range using inequalities;					
		S76Q3	S77Q1	S77Q3	S78Q1	S78Q2
		S100Q1	S101Q2	S112Q2	S114Q1	S115Q3
A.6(B)	write equations of quadratic functions given the vertex and another point on the graph, write the equation in vertex form ($f(x) = a(x - h)^2 + k$), and rewrite the equation from vertex form to standard form ($f(x) = ax^2 + bx + c$); and					
		S73Q1	S74Q2	S74Q3	S99Q3	S110Q2

A.6(C)	write quadratic functions when given real solutions and graphs of their related equations.					
		S75Q1	S75Q2	S100Q2	S102Q1	S112Q1
		S119Q3				
A.7(A)	graph quadratic functions on the coordinate plane and use the graph to identify key attributes, if possible, including x-intercept, y-intercept, zeros, maximum value, minimum values, vertex, and the equation of the axis of symmetry;					
		S56Q1	S56Q3	S57Q1	S57Q2	S58Q1
		S61Q1	S62Q2	S69Q3	S95Q1	S103Q3
		S111Q2				
A.7(B)	describe the relationship between the linear factors of quadratic expressions and the zeros of their associated quadratic functions; and					
		S68Q1	S68Q3	S73Q2	S73Q3	S77Q2
		S98Q3	S103Q2	S108Q3	S109Q2	S109Q3
A.7(C)	determine the effects on the graph of the parent function $f(x) = x^2$ when $f(x)$ is replaced by $af(x), f(x) + d, f(x - c), f(bx)$ for specific values of a, b, c, and d.					
		S58Q2	S58Q3	S59Q1	S59Q3	S61Q3
		S63Q3	S64Q2	S67Q1	S72Q3	S76Q1
		S96Q3	S103Q1	S108Q1	S110Q3	S118Q1
		S118Q2	S120Q3			
A.8(A)	solve quadratic equations having real solutions by factoring, taking square roots, completing the square, and applying the quadratic formula; and					
		S62Q3	S64Q3	S65Q1	S65Q2	S69Q2
		S70Q3	S74Q1	S88Q1	S97Q1	S106Q3
		S109Q1				

Standard	Description					
A.8(B)	write, using technology, quadratic functions that provide a reasonable fit to data to estimate solutions and make predictions for real-world problems.					
		S66Q2	S67Q3	S72Q2	S102Q3	S116Q1
A.9(A)	determine the domain and range of exponential functions of the form $f(x) = ab^x$ and represent the domain and range using inequalities;					
		S87Q2	S87Q3	S107Q1	S107Q2	S117Q1
		S118Q3	S120Q2			
A.9(B)	interpret the meaning of the values of a and b in exponential functions of the form $f(x) = ab^x$ in real-world problems;					
		S83Q2	S84Q1	S84Q2	S104Q1	S105Q2
A.9(C)	write exponential functions in the form $f(x) = ab^x$ (where b is a rational number) to describe problems arising from mathematical and real-world situations, including growth and decay;					
		S84Q3	S86Q1	S86Q2	S104Q2	
		S114Q2	S114Q3	S119Q1		
A.9(D)	graph exponential functions that model growth and decay and identify key features, including y-intercept and asymptote, in mathematical and real-world problems; and					
		S83Q1	S83Q3	S97Q2	S104Q3	S105Q1
		S113Q3	S115Q1	S117Q3	S119Q2	
A.9(E)	write, using technology, exponential functions that provide a reasonable fit to data and make predictions for real-world problems.					
		S86Q3	S87Q1	S105Q3	S106Q2	S115Q2
A.10(A)	add and subtract polynomials of degree one and degree two;					
		S1Q1	S1Q2	S1Q3	S2Q1	S2Q2

A.10(B)	multiply polynomials of degree one and degree two;					
		S48Q3	S50Q1	S50Q3	S76Q2	S93Q2
A.10(C)	determine the quotient of a polynomial of degree one and polynomial of degree two when divided by a polynomial of degree one and polynomial of degree two when the degree of the divisor does not exceed the degree of the dividend;					
		S80Q3	S90Q1	S90Q2	S107Q3	
A.10(D)	rewrite polynomial expressions of degree one and degree two in equivalent forms using the distributive property;					
		S2Q3	S3Q1	S3Q2	S4Q1	S5Q3
A.10(E)	factor, if possible, trinomials with real factors in the form $ax^2 + bx + c$, including perfect square trinomials of degree two; and					
		S51Q1	S52Q2	S52Q3	S53Q2	S53Q3
		S60Q3	S65Q3	S68Q2	S102Q2	S112Q3
A.10(F)	decide if a binomial can be written as the difference of two squares and, if possible, use the structure of a difference of two squares to rewrite the binomial.					
		S54Q2	S54Q3	S55Q1	S55Q2	S95Q3
A.11(A)	simplify numerical radical expressions involving square roots; and					
		S81Q1	S82Q2	S79Q1	S79Q3	S81Q1
		S82Q2	S111Q1			
A.11(B)	simplify numeric and algebraic expressions using the laws of exponents, including integral and rational exponents.					
		S81Q2	S82Q1	S82Q3	S79Q2	S80Q1
		S80Q2	S81Q2	S82Q1	S82Q3	S111Q3
		S113Q2	S120Q1			

A.12(A)	decide whether relations represented verbally, tabularly, graphically, and symbolically define a function;					
		S7Q2	S7Q3	S8Q1	S18Q2	S96Q1
A.12(B)	evaluate functions, expressed in function notation, given one or more elements in their domains;					
		S8Q3	S9Q1	S9Q2	S10Q2	S23Q2
		S71Q2	S92Q2			
A.12(C)	identify terms of arithmetic and geometric sequences when the sequences are given in function form using recursive processes;					
		S88Q2	S89Q2	S90Q3	S115Q2	
A.12(D)	write a formula for the nth term of arithmetic and geometric sequences, given the value of several of their terms;					
		S27Q1	S28Q2	S88Q3	S89Q1	S89Q3
A.12(E)	solve mathematic and scientific formulas, and other literal equations, for a specified variable.					
		S9Q3	S10Q1	S17Q2	S50Q2	S98Q2 .