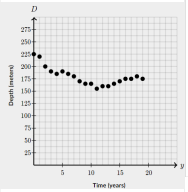
Question Topic/Area/Skill	Subscore category	Question	Gist of the question	Correct answer	Chosen answer	Why I missed it
Polynomial factors and graphs		A polynomial function f is defined as f(x)=3(5x+3)(x+2)(7x-1). Which of the following is a zero of function f?	find zeros of the equation	-2	3	3 is not equal to 0, dont get confused with the factor in the front
Key features of graphs		 The plot at left in the yD-plane shows the depth, D, in meters of a volcanic lake exactly y years after the date of first recording. What is the significance of the point plotted on the D-axis?	analyze graph and understand what y intercept stands for	The max recorded depth occured on the first recording.	The most recently recorded depth is 175 m.	I rushed and didnt understand the graph correctly
Function notation		x / $f(x)$ / $g(x)$: -2: -6, -5; -1: 2, -2; 2: 3, 4; 7: 7, 11. Consider the table shown above. What is the value of $(g \circ f)(-1)$?	function inside a function, use the table to find x for f, and then x of f for g	4	guessed, didn't know; -77	i didnt understand how the table worked
Structure in expressions		$\frac{m+n}{4} - \frac{4}{m+n} = \frac{(x-4)(x+4)}{4(m+n)}$ Which of the following is equivalent to x if the above equation is true for all $m \neq n$?	polynomials with variables, finding patterns with m+n and x and simpliying	m+n	root(m+n)	i couldnt find the polynomial patterns in the two fractions and didn't simplify the difference of squares
Structure in expressions		$(w-3)^5 - (w-3)^2$ Which of the following is equivalent to the above expression?	simplify	(w-3).^2 * ((w-3)^3 - 1)	(w-3)^3	didnt know the equation to simplify and I don't understand why the answer is what it is
Structure in expressions	Passport to advanced math	$\frac{x^2}{x-2} + \frac{4}{2-x}$ Which of the following is equivalent to the expression shown above for $x \neq 2$?	simplfy the expression	(x+2)	(x^2 + 4)/(x-2)	I didn't simplify the exression completely
Data inferences		An archaeologist uses an accelerator mass spectrometer to find the age of a buried branch. At the 68%, percent confidence level, the spectrometer reports that the branch was 10,000 years old with a margin of error of 200 years. Which of the following could the spectrometer report as the age of the branch at the 95% percent confidence level?	scienctific question, understand what the question is asking (background knowledge?)	10,000 years old, with a margin of error of 500 years	10,000 years old, with a margin of error of 50 years	didnt know what exactly was a margin of error, I thought it meant the difference in the results
Function notation	none	Consider the equation shown above, where Q and P are functions. If (x0, y0) is a point on the graph y = Q(x), which of the following is a point on the graph of y = P(x)?	**i dont know**	(2x0, 2y0)	(x0/2, 2y0)	didnt understand what the question was asking and i thought it involved complicated equations with reversing what was done in the original equation
Radicals and rational exponents	none	$\left(\frac{1}{9}\right)^{-1.5} \cdot \left(\frac{1}{8}\right)^{\frac{2}{3}}$ What is the value of the above expression?	simplify	27/4	243/4	didnt do radicals and fraction exponents right
Linear function word problems	Heart of algebra	The gas tank in Ms. Brown's car holds a total of 15 gallons. At any given time, how many gallons, g, will Ms Brown have to pump into her car to fill her tank given the fraction of the tank, f, already filled?	make an equation based on word problem	g = 15 - 15f	g = 15 - 15/f	since 15 and the remaining number of the gallons (which is a fraction) is already a fraction and is finding the fraction, im not supposed to divide the fraction again
Interpreting nonlinear expressions	Passport to advanced math	A certain type of molusk has a shell in teh shape of a sprial, as shown below. The distance, r, from the origin to a point on the sprial is modeled by the equation abovem, where 00 is the angle, in radians, measured counterclockwise from the psoitive x-axis to the same point on the sprial. What is the best description of 0.5 in this formula?	understand circles and graphs and equations	0.5 units is the length of the radius corresponding to 00 = 0	0.5 is the ratio of radii that differe by 2pi radians	i should have plugged ina value for 00 and then tried to understand what 0.5 meant and looked at the question more carefully

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Linear and exponential growth	Problem solve and data analysis	$P/Y = 1.50$ The price P of a good, in dollars, between the years 2005 and 2010 can be approximated using the equation above, where Y is the number of years since the beginning of 2000. Which of the following correctly describes the growth of P with respect to Y?	understand what the equation means when changes	Each year, *P* increases linearly by 1.50	Each year, *P* increases linearly by 50%	if it increased by 50% each year, then it would be exponential, not linear, and nowhere is it saying that it cincrease 50%, because 1.50 is the factor that it is increasing by
Solving systems of linear equations	None	$6(1-a) = 3(a-b) + 1$ $4(b-2) = 3a$ Consider the system of equations above. If (a,b) is the solution to the system, then what is the value of $a \cdot b$?	find a and b of the systems of equation and multiply	1,276/243	44/27	44/27 is the value of a, not a * b