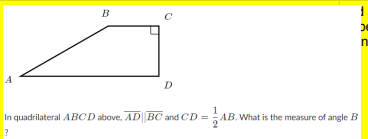
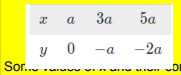
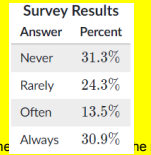
Question Topic/Area/Skill	Subscore category	Question	Gist of the question	Correct answer	Chosen answer	Why I missed it				
Polynomial factors and graphs	Passport to Advanced Math	a(t)=(t−k)(t−3)(t−6)(t+3) is a polynomial function of t, where k is a constant. Given that a(2)=0a(2)=0, what is the absolute value of the product of the zeros of a?	substitute x=2 and set equation to 0. find k, multiply zeros and find absolute value	108	1080	instead of calculating 0=20(2-k) as 0=40-20k, I calculated it as 0=40-2k and ended with an extra zero at the end of the answer				
Data collection and conclusions	Problem Solve and Data Analysis	A researcher wants to find out the average amount of money that US adults spent on gifts during November and December of the previous year. The researcher administers the survey to 1,000 randomly selected US adults from Arizona, asking the question: "How much did you spend on gifts during November and December of last year?" The data collected showed that the mean number of dollars spent per adult was $154. Which characteristic of the survey could have created unreliable data?	which piece of the data collected was unreliable and would have altered the best results?	The criteria used to select survey takers did not give each US citizen an equal chance of being surveyed.	The size of the sample was too small.	the entire population was being studied, not a sample of the population				
Solving quadratic equations	None?	2(x+4)^2=6. Let x=a and x=b be distinct solutions to the equation shown above. What is the exact value of a * b?	find two different values of a and b and multiply	13	15 (guessed)	i approached the question wrong: the equation should have been made into a radical to have a positive and a negative answer, instead of finding new roots				
Linear function word problems	Heart of algebra	A hot air balloon reaches its maximum cruising height of 1,500 ft above sea level. Over the next 5 minutes it descends at a constant rate to a new cruising altitude of 1,200 ft above sea level. If x represents the time, in minutes, after starting the initial descent, and y represents the height, in feet, of the hot air balloon, which of the following equations best models the situation for 0 ≤x≤5?	find descent per minute and make a linear equation	y = 1500 - 60x	y = 1500 - 5x	i didnt find the descent per minute, which is 60 ft per minute, and didnt do the math by subtracting 1500-1200 and simplifying to find the right equation				
Units	analysis in Science; Problem Solving & Data Analysis	What is a peregrine falcon's maximum speed while diving to catch prey, in feet per second? (Round your answer to the nearest whole number. 1 mile = 5280 feet)	convert 200 miles/hr to ft/second	293	17600	instead of dividing 200x5280 by 360 (for seconds and minutes) i divided it by only 60, and ended up with the wrong answer				
Percents	analysis in Science; Problem Solving & Data Analysis	If a peregrine falcon dove at its maximum speed for half a mile to catch prey, how many seconds would the dive take? (Round your answer to the nearest second.)	fidn half of a mile in feet and divide distance by speed for time	9	7	i divided the first wrong anwer (17600) by half a mile in ft (2640) and got 7, but that was completely wrong. i had to divide the distance by speed (with the correct answers) so it would be 2640/293 and end up with 9 - seconds.				
Radicals and rational exponents	Passport to Advanced Math	In the xy-plane, a line that has the equation y = c for some constant c intersects a parabola at exactly one point. If the parabola has the equation y = -x^2 + 5x, what is the value of c?	understand how the given parabola would look like, then "complete the square" with the equation (b/2)^2 which would be the answer	25/2	0	instead of understanding what the parabola would like like and completing the square, i factored the equation and thought the answer would be a zero of the function. --- completing the square: 5/2 x 5/2 = 25/4, the answer				
Circle theorems	None	 In quadrilateral $ABCD$ above, $\overline{AD} \parallel \overline{BC}$ and $CD = \frac{1}{2}AB$. What is the measure of angle B ?	l angle measure B by splitting the pezoid, forming a recognizable ngle and rectangle	150 degrees	120 degrees	by splitting the trapezoi, we get a rectangle and a triangle. all four sides of the rectanlge would be 90 deg, and since the hypotenuse of the triangle is 2x, the sides corresponding to the other sides would be x and xroot3, resulting in a 30 60 90 triangle. now we know parts of the angle B are 60 and 90 deg, total is 150 (the answer)				
Linear function word problems	Analysis in science; heart of algebra	H=1.88L+32.01H The formula above can be used to approximate the height H, in inches, of an adult male based on the length L, in inches, of his femur. What is the meaning of 1.88 in this context?	understand the equation and parts of the equation	The approximate increase in a man's height, in inches, for each one-inch increase in his femur length	The approximate increase in a man's femur length, in inches, for each one-inch increase in his height	by susbtituting simple values for L we can understand what it represents				
Sysetms of linear equations word problems	Heart of algebra	 Some values of x and their corresponding values of y are shown in the table above, where a is a constant. If there is a linear relationship between x and y, which of the following equations represents the relationship?	do y2-y1 / x2-x1 and find the slope interccept equation, see what else fits with the question	x + 2y = a	x + 2y = 5a	i did y2-y1 / x2-x1 either wrong or used different values or did simple math mistakes, i was then supposed to plug in the slope in the slope intercept form and find the same equation				
Scatterplots	Problem solving and data analysis	The maximum value of a data set consisting of 25 positive integers is 84. A new data set consisting of 26 positive integers is created by including 96 in the original data set. Which of the following measures must be 12 greater for the new data set than for the original data set?	how will the data set change with new values	the range	the median	didnt read the question CAREFULLY!!!!!!!! >(				
ratios, rates, and proportions	analysis in history/social studies; problem solving and data analysis	 The results of a survey in which tablet users were asked how often they would watch video advertisements in order to access streaming content for free. Based on the table, which of the following is closest to the probability that a tablet user answered "Always," given that the tablet user did not answer "Never"?	find what percent "always" would be in probability without the option "never"	0.45	0.31	youre supposed to divide the percent by the whole without the "never" option and get the percent out of that				

Survey Results

Answer	Percent
Never	31.3%
Rarely	24.3%
Often	13.5%
Always	30.9%

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		3x + b = 5x - 7 3y + c = 5y - 7 In the equations above, b and c are constants. If b is c minus 1/2, which of the following is true? A) x is y minus 1/4. B) x is y minus 1/2. C) x is y minus 1. D) x is y plus 1/2.	system of equations, find what x is equal to in terms of y	A) x is y minus 1/4.	B) x is y minus 1/2.	i tried to look for patterns bu in this equation, there are too many variables that can be literally anything, so it is better to isolate, and then once both equations are equal to the same thing, set the two expressions equal to each other and solve				
		An online store receives customer satisfaction ratings between 0 and 100, inclusive. In the first 10 ratings the store received, the average (arithmetic mean) of the ratings was 75. What is the least value the store can receive for the 11th rating and still be able to have an average of at least 85 for the first 20 ratings?	using variables and finding variables in an equation for finding the average	50	??? not answered (fill-ins)	didnt know what to do: the first 10 ratings were 75, so the sum of the first 10 ratings is 750. the other 10 ratings out of 20 are: the 11th one has to be the lowest one, and since the ohter 9 can be super high, we're gonna set 9 ratings to 100, so the sum would 900. now 900 + 750 is equal to 1650. so (1650 + x)/20 = 85. so we do 20 x 85 = 1700. and then we do 1700=1650 which is 50. ta-da!! :D				