

Algebra mathematics work essay example



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This discussion post or essay has basically been undertaken to understand some standard

results in Algebra in Mathematics. We would analyze the importance of using derived and

standard results and also about how they ease our calculations drastically.

We would also

learn about some elementary but very important terms like Exponents, Integers etc. and

their usage with respect to solving questions in Algebra.

Here in the given questions we have got three variables namely a, b, c which have been

assigned values according to the problem statement (based on my date of birth). All three

variables are integers with ' b' being the lowest term and hold the following values:

$$a = 8$$

$$b = -2$$

$$c = 87$$

Then we evaluate the algebraic equations based on the values of these three values.

Mentioned below are the algebraic expressions and their calculated values based on the

<https://assignbuster.com/algebra-mathematics-work-essay-example/>

substitution of a, b and c.

$$a^3 - b^3 = 520$$

$$(a - b)(a^2 + ab + b^2) = 520$$

$$(b - c) = 89/12$$

$$(2b - a)$$

The first expression. is obtained by calculating the values of ‘ a’ exponent (or power) 3

minus ‘ b’ exponent 3 which come out to 512 and -8 respectively and on subtraction we

finally get 520.

For the second expression we subtract ‘ a’ and ‘ b’ to get 10 and then multiply

it with the sum of ‘ a’ exponent 2 (64), ‘ a’ multiplied by ‘ b’ (-16) and ‘ b’ exponent 2 (4). Thus

we obtain the final value and it was 520 again.

For the third and final expression, we calculate ‘ b’ minus ‘ c’ and get -89 (-2-87=-89) as the

numerator of our expression. To calculate the denominator, we subtract ‘ a’ from twice of ‘ b’

and obtain -12. Thus the final value is -89/-12 where -12 forms the divisor of the

expression and finally since both numerator and denominator have minus signs, the final

output is positive since both the minuses are cancelled and the final figure is 89/12.

4) We examine that the values of first and second expressions are same when calculated

and that is 520. On some mind application and careful study we conclude that this not just a

mere coincidence and that the results are in accordance with the standard mathematical

results. The first two expressions complement each other and are always equal as

$$a^3 - b^3 = (a - b)(a^2 + ab + b^2)$$

stated on OnlineMath4all (n. d.). Hence, this clearly explains the reason behind the same

and equal calculated values of first two expressions.

OnlineMath4All (n. d.). Algebraic Identities. Retrieved from
<http://www.onlinemath4all.com/algebraicidentities.html>