

Student

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Algebra 1 & English 9

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Comment [D1]: Here's a sample student paper from last year . You'll see it does a nice job with explaining the process and has good flow. You'll also notice it doesn't use passive voice as we are required to do and doesn't make much use of equations or diagrams to help out. Last year, this paper received an "A" in regular English – THIS YEAR, this paper would do no better than a "B", "C+" at best in Honors!

All in All, They're All Just Bricks in a Wall

Our group's assignment was to figure out how many bricks there were on all parts of the short wall. We needed to find a way to figure this problem out that was fast and efficient. First we will find the area using length times height. We didn't need to do any special ways of measuring it because it was short enough to look over. We did not have any windows or doors on our wall. Then once we found that, we used unit analysis to convert it from feet squared to bricks. Our group observed the wall and made our hypothesis 3,000 bricks. Which in the end was not a great prediction.

The initial step to solving this problem was to measure our wall's length and height. We did this using a tape measurer. We started on the long wall first going twenty feet and marking it with a finger and then going twenty more feet until we came to a conclusion of 87 feet. Then we measured the height of our wall. This was pretty easy considering we could look over it onto the ground. The height of the wall measured three feet, six inches. To solve the problem we had to put it all in feet, so that would be 3.5 feet. Next we had to measure the smaller part of the walls length (the flaps), which turned out to be seven feet, 3 inches (7.25 ft).

After finding all the lengths, it was time to calculate the area. To find the area of a rectangle you use length times height. So for the larger wall we had to measure, you would do the length (87 feet) times the height (3.5 feet) and get 326.25 ft² for the area. Now we had to find

the area of the two flaps (smaller walls), so we used the equation to find the area of a rectangle again. The smaller wall's length was 7.25 ft. and it's height was 3.5ft. We multiplied those together to get an area of 25.74ft². So the two walls area combined together was 51.48ft². To get the total area you add all the walls areas together. So we added the two smaller walls (51.48ft²) with the larger wall (326.25ft²) and got 377.73ft², which we later rounded off to 377ft². After looking over it again, I see that we should have rounded it off to 378ft² instead if 377ft². So that is what I am going to do. We are now done with area!

Now that we have the area in feet squared, all we have to do is use unit analysis to convert the feet squared into bricks. The whole point of unit analysis is to cancel out the units you do not want, leaving the units you want left. To start off the unit analysis you have to know where we got the numbers from. We figured one brick to equal 23.38in² by finding the area of the brick (l x h) plus its mortar joint. This information helped us out a great deal in finding out how many bricks there were. To start out you put 378ft² (area of walls) over one. Then you have to cancel the feet squared out so you put 144in² over 1ft². That's cancels out feet leaving inches, but we do not want inches, we want bricks! So now you put one brick over 23.38in². Now that the inches cancel out, all that is left is bricks. Now you simply multiply across the top and bottom getting 54,432 over 23.28. You divide that out and get a final answer of 2,328 bricks. We rounded it to get this answer.

To sum it all up, I am going to explain to you why this process is useful and important. Many people in the world use this process. It is a necessity because if you are building something or filling something with cement, you need to know how much you need to order. You do not want to order way too much or way to less because you do not know this process. Imagine twenty cement trucks coming to your house! You would have to pay so much more money! That

would be a nightmare (although a good story to tell to your friends). So because of this reason, this process is very useful and important to know.