

Erin the exponent

Business



Dear Ms. Matthews, I'm a tiny number that sits above an integer, not taking up much space, but still I am strong.

So strong, in fact, that I can make 2 into 33, 445, 532 with the right value. Have you guessed what I am yet? Yes, I know it might take a while, considering how little people pay attention to us. I am an exponent. We can do many magnificent things. We multiply an integer by itself however many times the value of an exponent is, which the general use of us is. Other times, it is used when a number is too big to write out that is called scientific notation.

Still other times, we are used in area and volume to show the dimension. We are extremely useful and important, and I have cold hard facts to prove my point. $4 \times 4 \times 4 \times 4 \times 4 \times 4 \times 4 \times 4 \times 4 \times 4$ - If you had to write that out for every single problem, you would take up unnecessary time and paper. It would be so much easier just to write multiply four eleven times. This is what we do! So, you would write 4^{11} and read it four to the eleventh power. This is 24 times quicker.

Your students will write faster, therefore getting their test, quizzes, and classwork done with time to spare. What if had to write all of that out on every problem for every answer? It would take years! Now do you understand our importance? Another incident is when a number is way too large or too small to even consider writing it down. This is usually in science, so it is called scientific notation. An example would be the distance from the Sun and Earth, or the distance from the surface to the center of the Earth. To write this, you move the decimal point until the number is in between 1-9;

then you multiply your new number to the ten and a power of however many spaces you moved the decimal. An example would be changing 2, 345, 000 to 2.345×10^6 .

345×10^6 . Even though we are small in size, having us present makes all the difference. We have even more uses, area and volume. If you just put 3 ft, nobody would know that you meant the area is 3 feet and not the perimeter or just one side. This is why you do the unit of measurement squared, which means it would be 3 ft^2 , and we help with that by adding the exponent to create " squared.

" This is done because it is showing dimension. We decided to help others who solve problems with area, so they won't get confused. Volume is in much of the same matter. Since volume is showing length, width, and height, while area is just showing length and width, it has a three as the exponent. The exponents have pitched in a helping hand for both area and volume. As you can tell, exponents are used more than enough in math to be considered important.

We give numbers the extra push to make them bigger than they already were. Also, we save paper as well as whole rainforests because it is so much less to write a tiny exponent than to write out the base a certain amount of times, and we make writing large numbers in science a snap. Another important thing is that we show volume and area so students won't get confused which is area, volume, and perimeter. I feel my fellow exponents and I do more than required of any math term, and we should receive the respect we so readily deserve. Please work us into your lessons more and

pass on our importance to the adolescents you teach. Thank you, Erin
(exponent)