College Bound Math Solutions #21
week of April 6, 2015

After 48 months the bull's initial weight of 40 has been multiplied by 105% = 1.05 forty-eight times and has become $40 \times (1.05)^{48}$. The base 10 logarithm of this is $\log 40 + 48 \log(1.05) = 1.60206 + 48(0.021189) = 1.6021 + 1.0171 = 2.6192$
(On a typical calculator, "log" implies base 10.)

Now that you have found the ***log*** of the 4-year-old bull's weight, you need to take the inverse of that amount to undo it and get the actual value. That is, you need the so-called ***anti***log of 2.6192. This is done on many calculars by using the key labeled 10^x or x^y. On mine, the input shows up with a caret (^) and in this case we want 10^(2.6192) which comes out as 416 to the nearest integer.

Another question: How many days before the bull's 4th birthday did the bull reach 400 kg?