I have a technique that might help us while solving algebraic equations; especially while finding out factors. You will need:

* A scientific calculator
* And obviously an equation

Let’s set out an example:

Factorize:

**x6+2x5-3x3-4x2+4=0**

**Use your calculator to type same form of equation as mentioned above. Now save it. Now press CALC and a numerical value to substitute ‘x’. you will see a value as an answer. Try it continuously until you see ‘0’ as an answer. After you see zero, you can use the factorial value to factorize the equation.**

**For this equation, the value be 1, so since**

**x=1,**

**X-1=0**

**Now, use the value to factorize. Try and factorize the equation in such a way that you get x-1 in every step which can be used as a common value. So for that purpose, we can change equations as follows:**

**X6-x5+3x5-3x4+3x4-3x3-4x2+4x-4x+4=0**

**When you see this equation, it seems pretty complicated. Yet the idea is to make the equation to have (x-1) in every step. That way you can take (x-1) as a common term.**

**X5(x-1) +3x4(x-1) +3x3(x-1)-4x(x-1)-4(x-1)=0**

**Now take (x-1) as a common term. The new form will be;**

**(x-1)(x5+3x4+3x3-4x-4)=0**

**Use the same process of calculating via a calculator. Use the second equation and type it in a calculator. Substitute its values until you get a zero. Then follow same procedure as above.**

**(This process might not be applicable for every equation. For such equations, you have to convert them to completed square form and then factorize.)**

**If you want to know how to think of a number that matches up with zero, while doing the process as in a calculator, try finding out ranges when you put different numbers. Let’s say if you put ‘2’ in the above equation, the value is 92. If you put 3, its 1102. The series is increasing. Similarly, if you put -1, the value is 2 and 12 when put -2.so that means the range is from -1 to 1. Now 1 gives the value of zero. Try it, Saves your time. Especially in exams. -by niroj sapkota**