8-5.notebook April 10, 2014

Section 8-5 Factoring $x^2 + bx + c$

Students will be able to factor quadratic trinomials with a leading coefficient 1.

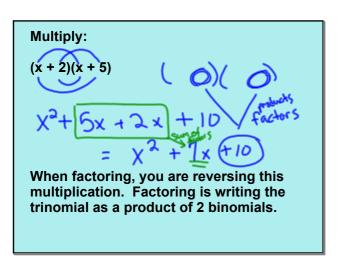
The area of a rectangular solar panel is given by the trinomial $x^2 + 7x + 12$. The height of the solar panel is x + 3. What is an expression for the length of the panel? Explain.

Aug 18-2:52 PM Aug 18-2:52 PM

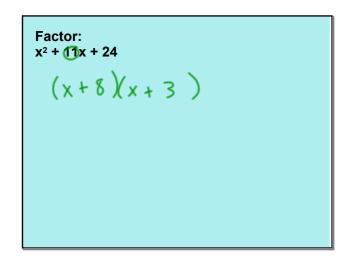
 $x^2 + 12x + 20$

Different Methods:

List Factors of 20



Aug 18-2:52 PM Aug 18-2:52 PM

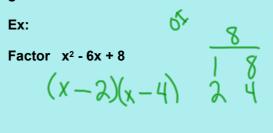


If the middle term is a negative, then you will need to use the negative factors of c to get the middle term.

The middle coefficient comes from the sum of two factors of the last term. (because the leading coefficient is one)

+12x+20

Box Method



Aug 18-2:52 PM Aug 18-2:52 PM

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If the last term is negative, you will use a positive and a negative factor of c to get the middle term.

Factor:

n² + 9n - 36

(n+12)(n-3)

Factor: $r^2 - 4r - 21$ (r + 3)(r - 7)

Aug 18-2:52 PM

Aug 18-2:52 PM

The area of a rectangle is given as $x^2 - x - 72$. What are the possible dimensions of the rectangle? Use factoring.

A = Cw $x^2 - x - 72 = (x - 9)x + 8)$ $x^2 + 8x - 9x = 73$ You can also factor trinomials that have more than one factor.

Factor:

m² + 6mn - 27n²

(m-3n)(m+9n)

9mm 3mn

(3 9)

Aug 18-2:52 PM

Aug 18-2:52 PM

Hwk: pg 515-516 #10 - 42 (evens), 43, 44, 50 - 58 (4th)