

DEFINITIONS

BINOMIAL: 2 Terms

EX. (2x - 4)

FACTORED FORM: Simplified Polynomial

EX. (2x + 4) (x - 7)

w/ Parentheses

Which expression is equivalent to $-6x^2 - 11x - 4$? X

A $(3x + 7)(3x - 3)$

B $(-3x + 4)(2x - 1)$

C $(3x - 7)(3x + 3)$

D $(-3x - 4)(2x + 1)$

CAN YOU THINK
OF TWO WAYS
TO SOLVE THIS
PROBLEM?

1. Trinomial
2. Distribute

TRINOMIAL \rightarrow FACTORED FORM

$$x^2 - 7x + 10$$

$$(x^2 - 5x)(-2x + 10)$$

$$x(x-5) - 2(x-5)$$

$$(x-5)(x-2)$$

Diagram illustrating the AC method for factoring $x^2 - 7x + 10$. The product of the leading coefficient (1) and the constant term (10) is 10. The factors of 10 that sum to the middle coefficient (-7) are -5 and -2. These factors are used to split the middle term.

FACTORED FORM -> TRINOMIAL

$$(x - 2)(x - 5)$$

$$\underline{x^2 - 5x - 2x + 10}$$

$$x^2 - 7x + 10$$

PROVE THEY ARE THE SAME AND STATE SOLUTIONS

$$(2x + 1)(x - 2)$$

$$\underline{2x^2 - 4x + 1x - 2}$$

$$2x^2 - 3x - 2$$

$$2x^2 - 3x - 2$$

-4	1
-3	

$$\left(\frac{2x^2 - 4x}{2x} + \frac{1x - 2}{1} \right)$$

$$2x(x - 2) + 1(x - 2)$$

$$(2x + 1)(x - 2)$$

SOLUTIONS:

$$2x + 1 = 0$$

$$\begin{matrix} -1 & -1 \\ \hline 2x & = -1 \\ x & = -\frac{1}{2} \end{matrix}$$

$$x - 2 = 0$$

$$\begin{matrix} +2 & +2 \\ \hline x & = 2 \end{matrix}$$

$$x = \begin{matrix} -1 & 2 \\ 2 & \end{matrix}$$

COOL DOWN PROBLEM

Which expression is a factor of $x^2 - 5x - 6$?

- A** $x - 6$
- B** $x - 2$
- C** $x - 3$
- D** $x - 1$

Handwritten work in purple ink:

$$(x^2 - 6x)(+1(x-6)) - 6$$

$$x(x-6) + 1(x-6) - 5$$

A diagonal line is drawn through the work, with a '-6' written above it and a '1' to the right. Below the line, the expression $x(x-6) + 1(x-6) - 5$ is written again.

Handwritten factored form in blue ink:

$$(x-6)(x+1)$$

GRADED BEFORE END OF PERIOD