You may choose your own seats - if you leave open tables in the middle of the classroom, you may be asked to move

Write down everything you remember about factoring (reverse FOIL-ing) quadratic functions?

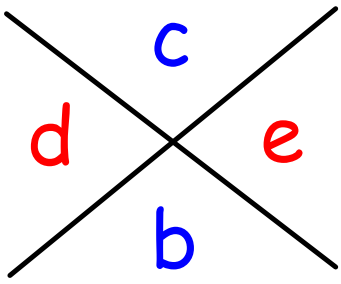
Dec 10-3:22 PM

When we factor, we take the quadratic from Standard Form

$ax^2 + bx + c = 0$

to Factored Form

$(x-d)(x-e) = 0$



when a = 1, d & e are the two numbers that **multiply** to c and **add** to b.

From your worksheet.

Solve each equation by factoring.

a=1
b=-7
c=12

2) $n^2 - 7n + 12 = 0$

$(n-3)(n-4)=0$

$n=3,4$

12
-3 -4
-7

3·4
2·6
1·12

$(3-3)(3-4)$
$0 \cdot -1 = 0$
$(4-3)(4-4)$
$1(0)=0$

10) $n^2 - 2n - 29 = 6$

$-6 \quad -6$

$n^2 - 2n - 35 = 0$

$(n-7)(n+5)=0$

$n=7,-5$

-35
-7 5
-2

5·7
35·1

a=1
b=-2
c=-35

#1-12
work on
NOW

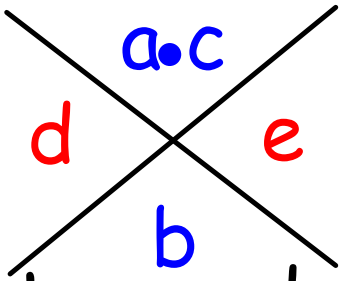
⑥ $v^2 + 7v = 0$

$v(v+7)=0$

0
7

When a ≠ 1, we have to guess and check or factor by grouping. We still make the X, and now look for the factors of a•c that add to b.

we rewrite ~~b~~ as dx + ex,



group together our first two and last two terms to factor by grouping. Let's look at the following two examples using this method.

Solve each equation by factoring.

13) $3n^2 + 16n - 64 = 0$

$a=3$
$b=16$
$c=-64$

$a \cdot c$
$3 \cdot -64$
-192
$-8 \quad 24$
16

$2 \cdot 96$
$3 \cdot 64$
$4 \cdot 48$
$6 \cdot 32$
$8 \cdot 24$
$12 \cdot 16$

$(3n^2 + 24n) - (8n - 64) = 0$

$3n(n+8) - 8(n+8) = 0$

$(n+8)(3n-8) = 0$

$n = -8, \frac{8}{3}$

$3n - 8 = 0$
$+8 \quad +8$
$\frac{3n}{3} = \frac{8}{3}$
$n = \frac{8}{3}$

19) $8a^2 - 35a + 12 = 0$

$a=8$
$b=-35$
$c=12$

$(8a^2 - 32a) - (3a + 12) = 0$

$8a(a-4) - 3(a-4) = 0$

$(a-4)(8a-3) = 0$

$a = 4, \frac{3}{8}$

$8 \cdot 12$
96
$-3 \quad -32$
-35

$2 \cdot 48$
$3 \cdot 32$
$4 \cdot 24$
$6 \cdot 16$

(14) $7n^2 - 6n = 0$

$n(7n-6) = 0$

$n = 0, \frac{6}{7}$

Homework

Solving Quadratics by Factoring WKS

Apr 5-8:24 AM