

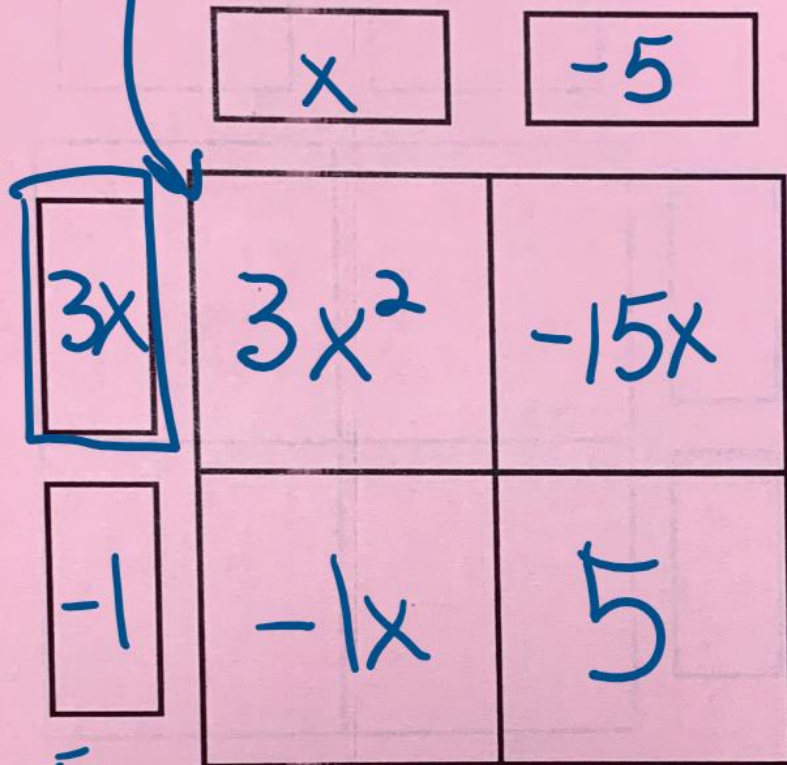
Factoring quadratics $a > 1$

Wednesday, August 14, 2019

7:17 AM

Factoring Quadratics

Factor $3x^2 - 16x + 5$



$3 \cdot 5$

~~$\begin{array}{cc} 15 & -1 \\ -15 & -1 \\ -16 & \end{array}$~~

$3x^2 - 16x + 5 = (x - 5)(3x - 1)$

Factor

$$4x^2 + 5x - 6$$

a *b* *c*

	x	2
$4x$	$4x^2$	$8x$
-3	$-3x$	-6

a.c

$$\begin{array}{c} -24 \\ -3 \quad 8 \\ 5 \end{array}$$

b

$$4x^2 + 5x - 6 = (4x - 3)(x + 2)$$

★ Always check for GCF

Factor $4x^2 - 14x + 12$

$2(2x^2 - 7x + 6)$

x

-2

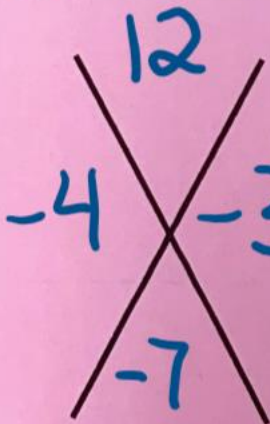
$2x$

$2x^2$	$-4x$
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-3

$-3x$	6
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a.c



Include GCF

$4x^2 - 14x + 12 = 2(2x - 3)(x - 2)$

b

Even problems are homework

Algebra 2 w/Support

Name _____

Factoring Trinomials $a > 1$

Date _____ Period _____

Factor each completely.

1) $10n^2 + 51n + 5$

2) $10a^2 + 21a - 10$

Handwritten solution for problem 1:

50
30
51

	$10n^2$	$5n$
n	$10n^2$	$5n$
5	$50n$	5

$(10n+1)(n+5)$

3) $6a^2 - 31a + 18$

4) $4a^2 + 16a + 15$

Handwritten solution for problem 3:

108
-4
-27
-51

	$6a^2$	$12a$
$3a$	$6a^2$	$12a$
-2	$18a$	18

$(2a-9)(3a-2)$

~~60
16~~

5) $6b^2 + 7b - 3$

6) $8m^2 + 56m$

Handwritten solution for problem 5:

-18
9
-2
76

	$6b^2$	$12b$
$2b$	$6b^2$	$12b$
3	$18b$	-3

$(3b-1)(2b+3)$

7) $9k^2 - 22k + 8$

8) $4r^2 - 33r + 8$

Handwritten solution for problem 7:

72
-18
-4
-22

	$9k^2$	$-18k$
k	$9k^2$	$-18k$
-2	$-4k$	8

$(9k-4)(k-2)$

9) $16p^2 - 52p - 90$

$2(8p^2 - 26p - 45)$

	$4p$	5
$2p$	$8p^2$	$10p$
-9	$-36p$	-45

$\begin{array}{r} -360 \\ -36 \times 10 \\ -45 \end{array}$

$2(4p+5)(2p-9)$

10) $36x^2 - 124x + 48$

11) $6r^2 + r - 5$

	$6r$	-5
r	$6r^2$	$-5r$
1	$6r$	-5

$\begin{array}{r} -30 \\ -5 \times 6 \\ 1 \end{array}$

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

12) $4n^2 - 5n + 1$

13) $3m^2 - 29m + 18$

	m	-9
$3m$	$3m^2$	$-27m$
-2	$-2m$	18

$\begin{array}{r} 54 \\ -27 \times -2 \\ -2 \end{array}$

$(m-9)(3m-2)$

14) $7k^2 + 58k + 16$

15) $2n^2 + 17n + 30$

	n	6
$2n$	$2n^2$	$12n$
5	$5n$	30

$\begin{array}{r} 60 \\ 5 \times 12 \\ 17 \end{array}$

$(n+6)(2n+5)$

16) $3n^2 + 7n$

17) $7x^2 + 4x$

$x(7x+4)$

18) $5m^2 + m - 4$