

Pg. 48-49 Factoring Trinomials Sec. 4.4

Find the Greatest Common Factor (GCF)

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$$\begin{aligned} & -49n^4 + 7n^2 - 28n \\ & -7n(7n^3 - 1n + 4) \end{aligned}$$

$$32x^3 + 40x + 48$$

$$8(4x^3 + 5x + 6)$$

Learning Targets

I CAN factor quadratic expressions completely
(GCF, Difference of squares, Trinomials)

Pg. 48-49 Factoring Trinomials Sec. 4.4

We Know that if we MULTIPLY 2 BINOMIALS by distributing, we usually have a TRINOMIAL PRODUCT.

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EX. $(x + 5)(x + 4) = x^2 + 9x + 20$

Now if we wanted to FACTOR a TRINOMIAL we need to use REVERSE DISTRIBUTION or the BOX method in reverse to find the 2 BINOMIALS.

$x^2 + 9x + 20$
 $(x+5)(x+4)$

Factoring Trinomials — (Binomial) x (Binomial)

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$x^2 + 6x + 8$

$(x+4)(x+2)$

$x^2 + 12x + 32$

$(x+8)(x+4)$

$x^2 - 7x - 18$

$(x-9)(x+2)$

$p^2 - 5p - 14$

$() ()$

$m^2 - 9m + 8$

$() ()$

$x^2 - 16x + 63$

$() ()$

$y^2 + 18y + 77$

y	7
y^2	$7y$
$11y$	77

 $(y+11)(y+7)$

$2n^2 + 7n + 6$

n	3
$2n^2$	$3n$
$4n$	6

 $(n+2)(2n+3)$

$3x^2 + 7x - 20$

x	-5
$3x^2$	$-5x$
$12x$	-20

 $(x+4)(3x-5)$

$x^2 + 12x - 48$

 $() ()$

$x^2 - 5x - 24$

 $() ()$

$a^2 - a - 90$

 $() ()$

Homework: Factoring Trinomials worksheet (1-10)

#10: (hint GCF first)

$$28n^4 + 16n^3 - 80n^2$$

$$4n^2 (7n^2 + 4n - 20)$$

~~$\begin{array}{cc} 4 & \\ 14n & -10n \\ -140 & \end{array}$~~

n	$7n - 10$
$7n^2$	$-10n$
$14n$	-20

$$4n^2 (n+2)(7n-10)$$