

## Algebra Worksheet 9.5 - 9.8

Name

Key

Hour

Factor completely. (notice  $a=1$  in the first 3 trinomials)

$x^2 - 6x + 16 \rightarrow 8, 2$

$(x+2)(x-8)$

$y^2 + 11y + 24 \rightarrow 8, 3$

$(y+8)(y+3)$

$x^2 + x + 12 \rightarrow 4, -3$

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

$\frac{-x^2 + x + 30}{-1 \quad -1 \quad -1} \rightarrow -6, 5$   
 $-1(x^2 - x - 30)$   
 $-1(x-6)(x+5)$

 $(a \neq 1, \text{ use a box})$ 

$5b^2 + 3b - 14$

b	2
5b	10b
-7	-14

~~$\begin{array}{l} -20b^2 \\ 10b \quad -7b \\ 3b \end{array}$~~

$(b+2)(5b-7)$

$6y^2 - 13y - 5$

2y	-5
3y	6y
1	2y

~~$\begin{array}{l} -20y^2 \\ -15y \quad 2y \\ 43y \end{array}$~~

$(2y-5)(3y+1)$

$4m^2 - n^2$

$(2m-n)(2m+n)$

$x^2 + 6x + 9$

$(x+3)(x+3)$   
 $(x+3)^2$

$\frac{4y^2 - 16y + 16}{4 \quad 4 \quad 4}$

$4(y^2 - 4y + 4)$   
 $4(y-2)(y-2)$   
 $4(y-2)^2$

$\frac{80b^5 - 5b^3}{5b^3 \quad 5b^3}$

$5b^3(16b^2 - 1)$   
 $5b^3(4b-1)(4b+1)$

$\frac{x^3 + 6x^2 - 7x}{x \quad x \quad x}$

$x(x^2 + 6x - 7)$   
 $x(x+7)(x-1)$

$\frac{(y^3 + 6y^2) + (y+6)}{y^2 \quad y^2}$

$y^2(y+6) + 1(y+6)$   
 $(y^2+1)(y+6)$

