

Special Cases Factoring HW

1). Diff of Squares

$$\sqrt{64x^2} - \sqrt{16y^2}$$
$$(8x - 4y)(8x + 4y)$$

2). $2x^2 - 11xy - 21y^2$

$$\frac{(2x-14)(2x+3)}{2}$$

$$(x-7)(2x+3)$$

$$(x-7y)(2x+3y)$$

$$\begin{array}{r} -42 \\ -14 \quad 3 \\ -11 \end{array}$$

3). $xy + 2y + 3x + 6$

$$y(x+2) + 3(x+2)$$

$$(x+2)(y+3)$$

4). $\sqrt{121x^4} - \sqrt{9z^8}$ - Diff of Squares

$$(11x^2 - 3z^4)(11x^2 + 3z^4)$$

5). $3x^3 - 12x + x^2 - 4$
 $3x(x^2 - 4) + 1(x^2 - 4)$

$$(3x+1)(x^2-4) \text{ Diff of Square}$$
$$(3x+1)(x+2)(x-2)$$

6). $9x^3 - 4x - 16 + 36x^2$

Rearrange: $9x^3 + 36x^2 - 4x - 16$

$$9x^2(x+4) - 4(x+4)$$
$$(9x^2-4)(x+4)$$
$$(3x-2)(3x+2)(x+4)$$