Algebra 1 8.8

Factor binomials that are the difference of squares

Use the difference of squares to solve equations

difference

factor

solve

whiteboards

$x^2 - 36$

$(x-6)(x+6)$

b. $121 - 4b^2$

$(11 + 2b)(11 - 2b)$

GuidedPractice

1A. $81 - c^2$

$(9 + c)(9 - c)$

1B. $64g^2 - h^2$

$(8g + h)(8g - h)$

GCF?

1C. $\frac{9x^3}{x} - \frac{4x}{x}$

$x(9x^2 - 4)$

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

Can it be rearranged?

1D. $\frac{-4y^3}{y} + \frac{9y}{y}$

$y(-4y^2 + 9)$

$y(9 - 4y^2)$

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

When is it finished? Check your answer...can anything be factored again? Watch out for DOS.

Example 2 Apply a Technique More than Once

Factor each polynomial.

a. $b^4 - 16$

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

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

esp. diff of squares...
easy to overlook

$(x \cdot x)(x \cdot x)$

b. $625 - x^4$

$(25 + x^2)(25 - x^2)$

$(25 + x^2)(5 + x)(5 - x)$

GuidedPractice

2A. $y^4 - 1$

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

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

2B. $4a^4 - b^4$

WB 8.8 prac.

2C. $81 - x^4$

2D. $16y^4 - 1$