Quadratic Equations Model parabolas

Real life examples: Throwing a ball

Launching a rocket

crater

Anything that models a u - shape or up side down u shape.

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Ch 10.4 Solving Equations in Factored Form

Factored Form: product of 2 or more linear factors (1st power)

Zero-product property: product of two factors is zero when at least one of the factors is zero.

The number of x's tell how many solutions you can have.

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What number(s) can you plug into the equation and make the expressions = 0?

Ex 1a) $(x - 2)(x + 3) = 0$

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Ex 1b) $(x - 4)(2x + 1) = 0$

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Ex 1c) $(2x + 1)(3x - 2)(x - 1) = 0$

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Try #1) $(5x - 3)(x - 2) = 0$

Ex 2a) $5(3x - 7)(x + 3) = 0$

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Ex2b) $2x(x-3)(2x-2) = 0$

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Solving Quadratic Equations:
1. Set the equations = 0
2. Factor the polynomial
3. set each binomial = 0
4. solve each equation

Ex3a) $x^2 + 11x + 18 = 0$

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Ex3b) $x^2 - 3x = 10$

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Ex3c) $2x^2 - 88 = 5x$

Try 2) $3x^2 - 2x = 21$

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Ex4a) $5x^2 - 10x = 0$

Ex4b) $8x^3 - 18x = 0$

Ex4c) $2x^3 - 10x^2 + 8x = 0$

Try #2. $12x + 4 = -9x^2$

Ex4c) $x^3 + 3x^2 - 4x = 12$

Try 4. $-60x^4 + 114x^3 - 36x^2 = 0$

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Apr 7-2:23 PM