

Solving Quadratics without Factoring - Example

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$$(x - 1)^2 - 12 = 0$$

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The operations that happen to x are:

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The operations that happen to x are:

Subtract 1

Square it

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▶ Like Frog and Toad

we undo these operations in the opposite order.

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In this example, to solve for x we have to undo 3 things.

The operations that happen to x are:

Subtract 1

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$$\sqrt{(x-1)^2} = \sqrt{12}$$

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$$x = x - 1 + 1 = 1 + \sqrt{12} \qquad x = x - 1 + 1 = 1 - \sqrt{12}$$

$$x = x - 1 + 1 = 1 \pm \sqrt{12}$$

Conclusion: The solutions of $(x-1)^2 - 12 = 0$ are: $x = 1 \pm \sqrt{12}$