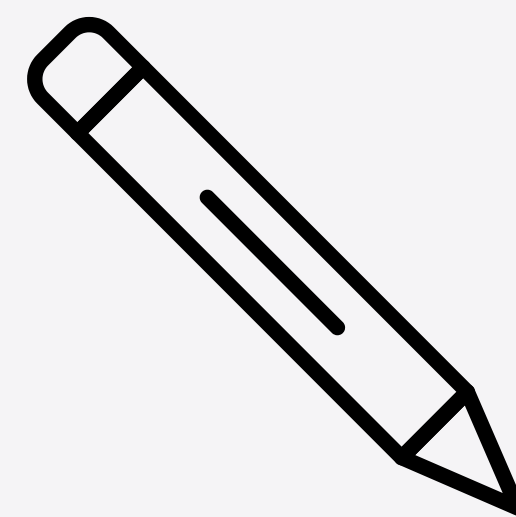


# REWRITE TO REVEAL



New arrangements can highlight key ideas

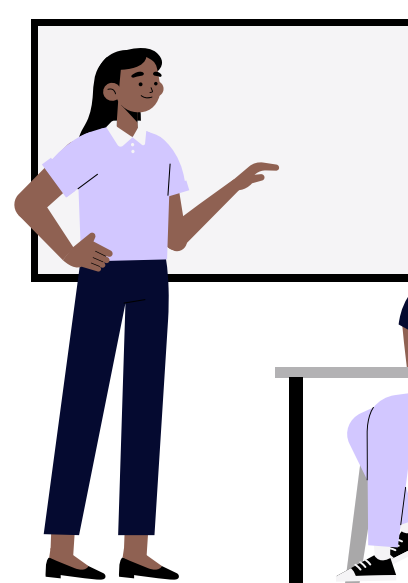
## TRY IT

Find alternate ways to write formulas that highlight something different about the formula.

## WHY TRY IT?

Rewriting the formula can help students

- recognize the utility of the formula
- develop flexibility with formulas
- make connections between different representations



Quadratic Formula

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

TAKE AN EQUATION THAT IS OFTEN WRITTEN IN ONE FORM

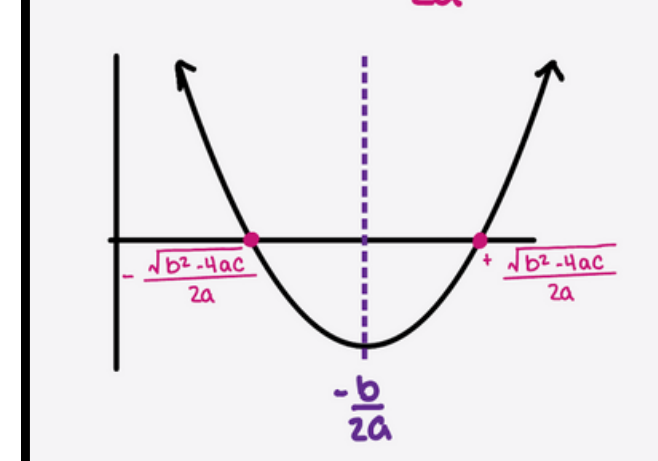
$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$x = \frac{-b}{2a} \pm \frac{\sqrt{b^2 - 4ac}}{2a}$$

REWRITE IT TO UNCOVER SOMETHING SPECIAL ABOUT THE EQUATION

Notice that the first part of the equation tells us the axis of symmetry.

$$x = \frac{-b}{2a} \pm \frac{\sqrt{b^2 - 4ac}}{2a}$$



The second half tells us how far to the right (+) and the left (-) the roots are from the axis of symmetry.

MAKE THE CONNECTIONS EXPLICIT TO THE STUDENTS.

## TEACHER NOTES

Rewrite the equation and share with students the connections to underlying concepts.

Select formulas you use regularly like rewriting the distance formula to show the relationship to the Pythagorean Theorem or the relationship to circles.

## CAUTION

Make sure you are intentional in highlighting the connections you want to make.

## LEVEL UP

Create a task sort where students group the cards into the same formula. Have them explain what each equation shows.

Have students rewrite a formula and explain the various concepts that are in the formula.

Have students write about what they notice after the teacher has rewritten the formula.



VIDEO



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TRY ANOTHER



HOW'D IT GO?