

Journal Prompt: Two Forms, One Parabola

Every parabola can be written as $y = a(x - p)^2 + q$ or as $y = ax^2 + bx + c$, and each form reveals different information at a glance.

Choose a quadratic function and write it in both vertex form and standard form. Explain which form makes it faster to identify the vertex, and which form makes it faster to identify the y-intercept, then justify why ([Outcome](#), [Outcome](#)).

Where to start:

- What does vertex form tell you immediately, without any calculation?
- What does standard form tell you immediately, without any calculation?
- How would you find the vertex if you were only given standard form?
- How would you find the y-intercept if you were only given vertex form?

Stretch:

Take your function and determine its x-intercepts. Explain how the number of x-intercepts connects to the direction of opening and the position of the vertex relative to the x-axis ([Outcome](#)).