when i know the y value of the vertex, how do i find the x value?

If you know the y-coordinate of the vertex of a quadratic function, you can use the vertex form of the function to find the x-coordinate of the vertex.

The vertex form of a quadratic function is:

y = a(x - h)^2 + k

where (h, k) is the vertex of the parabola.

If you know the y-coordinate of the vertex, which is k in the vertex form equation, you can substitute it into the equation to get:

y = a(x - h)^2 + k

Simplifying this equation, we get:

y - k = a(x - h)^2

Dividing both sides by "a", we get:

(y - k) / a = (x - h)^2

Taking the square root of both sides, we get:

√((y - k) / a) = x - h

Adding "h" to both sides, we get:

x = h ± √((y - k) / a)

So, to find the x-coordinate of the vertex, you can use the formula:

x = h ± √((y - k) / a)

where "h" is the x-coordinate of the vertex, "k" is the y-coordinate of the vertex, and "a" is the coefficient of the x^2 term in the quadratic function.

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