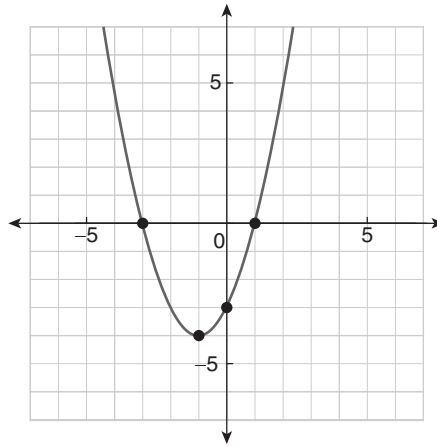


Seeing Structure in Expressions

1. Can $x = 1$ and $x = 3$ be roots of this function? Why, or why not? Write a possible formula for this function in factored form.



2. Use completing the square to find the extreme value of this function. Explain your steps.
3. Check your solutions to the function you created using the quadratic formula.
4. What do the graph, factored form, vertex form, and quadratic formula tell you about the function? How do the different forms relate to each other?
5. A quadratic function is given by $f(x) = 2(x-1)^2 - 50$. Use factoring to find the zeros of the function. Then, make a graph of the function.
6. What do the graph, factored form, and vertex form tell you about the function? How do the different forms relate to each other?