

NAME: _____

P.I. A.A.20: Factor algebraic expressions completely, including trinomials with a lead coefficient of one (after factoring a GCF)

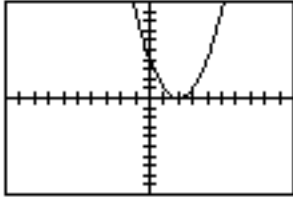
1. Explain how to factor out a monomial from a polynomial.
2. Suppose you can factor $x^2 + bx + 6$ into the product of two binomials. What must be true about b ?
3. Explain why the trinomial $x^2 - 4x + 4$ is a perfect square trinomial.
4. Use a graphing calculator to graph $y = x^2 - 4x + 4$. Use the x -intercepts of the graph to write $x^2 - 4x + 4$ in factored form.
5. Can a square have an area of $4x^2 - 4x - 1$? Why or why not?

[1] Find the GCF of all terms of the polynomial then factor out the GCF.

[2] It must be either -7 , -5 , 5 , or 7 .

Answers may vary. Sample: It can be factored into two binomial factors that are the same.

[3] $x^2 - 4x + 4 = (x - 2)^2$



[4] $x^2 - 4x + 4 = (x - 2)(x - 2)$

No; the area of a square must be the product of two of the same factors. Since $4x^2 - 4x - 1$ is not a perfect square trinomial, it is not the product of two of the same factors and thus cannot be the area of a

[5] square.