

WRITE YOUR FORMULAS & SHOW YOUR WORK

1. ***Write the General Form of a Quadratic Equation.
2. (***)Write the Quadratic Formula
3. ***Write the procedure for solving quadratic equations by the Zero Product Property
4. ***Write the formula for the discriminant and explain how it is used to determine the number of roots.
5. ***Write the formula for finding the axis of symmetry and vertex, (x-coordinate) in a quadratic equation.
6. ***Write the procedure for graphing a parabola in General Form
7. ***What is the value of i^2 and what is its significance?*

8. ****Use the discriminant to determine the number and types of roots in the equation, $y = 2x^2 - 3x + 7$**
9. ****Find the vertex of $y = x^2 - 10x - 13$**
10. ****In the equation, $y = 4(x + 6)^2 - 4$, identify the vertex.**
11. ****Write $y = x^2 - 6x - 4$ in vertex form. (Hint – complete the square)**
12. ****Graph $y = x^2 + 2x - 3$ using the vertex and symmetry around the axis of symmetry.**

13. ****Graph** $y = x^2 + 6x - 4$ using the vertex and x-intercepts.

14. ****Solve** $2x^2 + 15 = 13x$ by the Quadratic Formula

15. ****Solve** $x^2 - 3x - 10 \geq 0$ and graph the solution set using the Zero Product Property.

16. **** Find the solution set** $x^2 = -36$

17. **** Solve** $2(x - 3)^2 + 4 = 36$

18. ****Graph** $y < x^2 + 6x + 7$

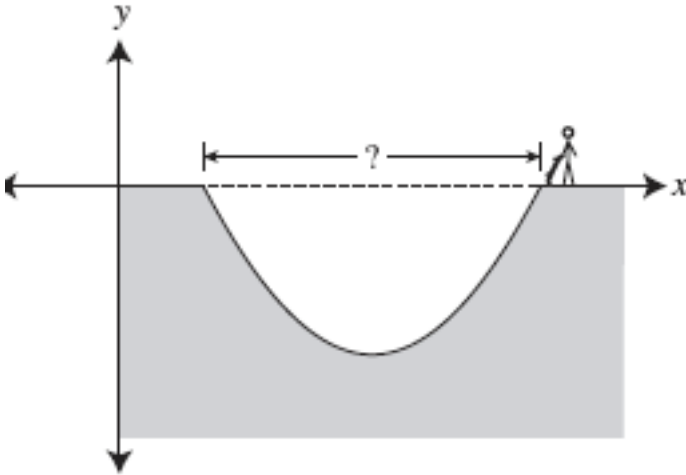
19. ****Graph** $y \leq -x^2 + 8x - 10$

20. ****Write in Standard Form,** $(3 - i) + (1 + 5i)$

21 ****Write in Standard Form,** $(2 + 3i) / (5 + 2i)$

22 **** i^{26}**

23. * ACT Alicia is designing a skateboard park, one skating area in the park will be shaped like a parabola shown below and described by the equation; $y = 1/6(x^2 - 18x + 45)$. What is the distance across the top and what is the greatest depth?



24. *ACT A real estate developer estimates that the monthly profit p in dollars from a building s stories high is given by $p = -2s^2 + 88s$. What height building would he consider most profitable?
25. ***Write a home phone, cell number, email or home address to contact your parent or guardian. (CHP)