II Practice Test Name _____

Graph Parabolas Date_____

1. ***Define Parabola

2. ***How do you find the focus and directrix?

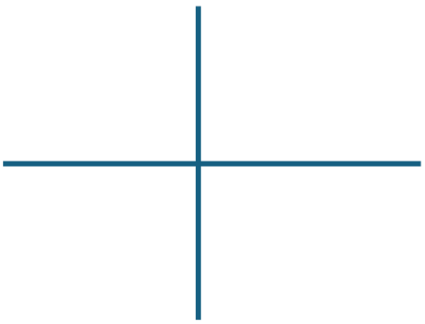
3. ***Write the “vertex” form of a parabola.

4. ***Write the procedure for graphing using the Vertex Form.

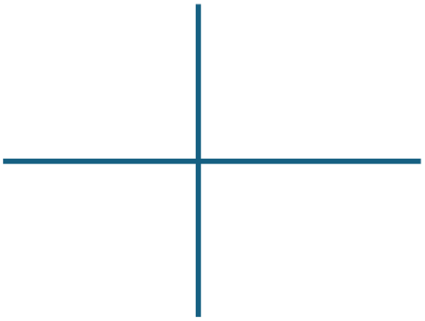
5. ***Using the General Form of a quadratic, how do you find the “x” coordinate of the vertex?.

6. ***How can it be determined if the graph of a parabola opens up or down?

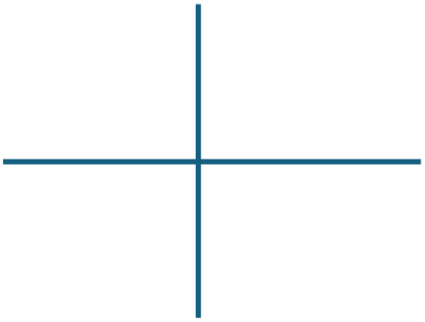
7. **Graph: $y = (x - 3)^2 + 2$



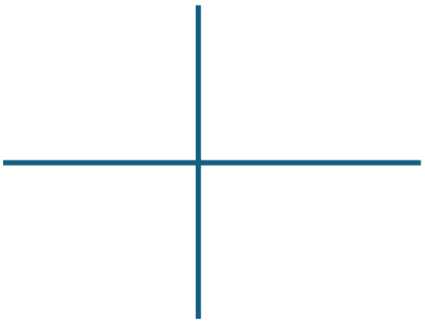
8. **Graph: $y = (x + 5)^2 - 4$



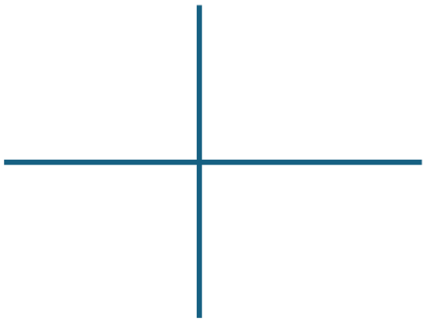
9. **Graph $y = 3(x + 1)^2 - 5$



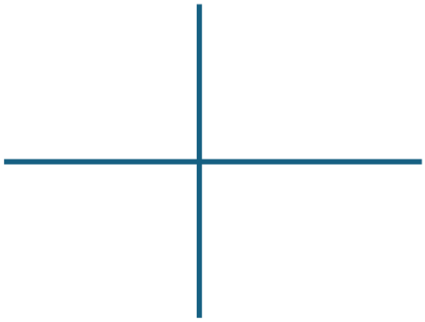
10. **Graph: $y = 2x^2 - 6x - 12$



11. **Graph: $x^2 - 3$



12. **Graph: $y = -4x^2 - 8x - 6$



13. ** Find the vertex, focus, equation of the directrix of the parabola; $y = 4(x - 1)^2 + 3$

14.** Find the equation of a parabola with vertex (2,3) and focus (2, 5).

15.**Find the equation of a parabola with vertex (2, 1) and passes through (4,13).

16.* An object is thrown upward with an initial velocity of 128 feet per second. If the height above ground after t seconds is given by the formula $h = 20 + 128t - 16t^2$, when will it reach it's maximum height and what is the maximum height of the object?

17. *An object is thrown upward with an initial velocity of 128 feet per second from a height of 20 feet above ground. If the height above ground after t seconds is given by the formula $h = 20 + 128t - 16t^2$, when will it reach its maximum height and what is the maximum height of the object?

18. *A shuttle operator charges a fare of $10 to the airport and carries 300 people per day. The owner of the shuttle service estimates for every dollar increase in fare, he will lose 15 passengers. Find the most profitable fare for him to charge.

19. *A building developer estimates the monthly profit **p** in dollars from a building **s** stories high is given by $p = -2s^2 + 88s$. To maximize his profit, how many stories should he build?

20. ***Write a home phone, cell number, email or home address to contact your parent or guardian. (CHP)