

Vertex Form MATHO Review Q&A

QUESTION	ANSWER
1. What is the vertex of $y = a(x - h)^2 + k$	
2. What part of the quadratic formula is the discriminant?	
3. Write $f(x) = -x^2 - 6x + 9$ in vertex form.	
4. Write $f(x) = 3(x - 4)^2 - 11$ in standard form.	
5. How many roots does the function $f(x) = 4(x - 3)^2$ have?	
6. What does the discriminant give about a quadratic function?	
7. What is the axis of symmetry of $f(x) = -2(x + 3)^2 - 1$	
8. If $f(x) = -x^2 + 45$ models the path of a rock kicked off a cliff, what is the height of the cliff, in feet?	
9. How many roots does the equation $-2x^2 - 3x - 5 = 0$ have?	
10. The height of a ball thrown upward off a balcony is given by $h(t) = -5t^2 + 20t + 22$. How long does it take for the ball to reach its maximum height?	

11.	For what value of k does $3x^2 + 6x + k = 0$ have 2 real solutions?	
QUESTION		ANSWER
12.	What is the vertex of $f(x) = (x + 7)^2 - 4$	
13.	Find the roots of $2x^2 - 3x - 5 = 0$	
14.	The population of a town is modelled by $P(t) = 6t^2 + 110t + 4000$, where $P(t)$ is the population and t is the time in years since 2000. What will the population be in 2020?	
15.	Find the vertex form equation of the parabola with vertex $(-1, 5)$ and y-intercept $(0, 3)$	
16.	What is the vertex of $y = -3(x - 1)^2$	
17.	How many roots are there if $b^2 - 4ac = 0$?	
18.	Write $f(x) = -(x + 7)^2 + 13$ in standard form.	
19.	The daily production cost of a toy is given by the function $C(x) = 0.2x^2 - 10x + 650$ in dollars, where x is the number of toys made. How many toys must be made to minimize the cost?	
20.	Solve $f(x) = 3x^2 + x - 3$ using the quadratic formula.	
21.	Write $f(x) = 3x^2 + 12x + 19$ in vertex form.	
22.	What is the vertex of $f(x) = 9x^2 - 16$	

23. Write $f(x) = -3(x - 2)(x - 4)$ in vertex form.	
24. When is the height of a soccer ball 8 feet if the path of the ball is modelled by the equation $h(t) = -4t^2 + 19t + 1$?	