

A3.1 Quadratics Math 1050	Name
1. The quadratic Function $f(x) = a(x - h)^2 + k$ is in standard form. a. The graph of f is the shape of a _____ with vertex (____,____) b. If $a > 0$, the graph opens _____. In this case $f(h)=k$ is the _____ value of f. c. If $a < 0$ the graph opens _____. In this case $f(h)=k$ is the _____ value of f.	
For the following find the vertex, max or min value, and the x-Intercepts and y-intercept.	
2. $f(x) = -x^2 + 6x - 5$ Vertex (,) Max or Min x-Intercepts (,)(,) y-Intercept (,)	3. $f(x) = -1/2x^2 - 2x + 6$ Vertex (,) Max or Min x-Intercepts (,)(,) y-Intercept (,)
3. $f(x) = 2x^2 - 16x$ Vertex (,) Max or Min x-Intercepts (,)(,) y-Intercept (,)	4. $f(x) = 2x^2 + 4x + 3$ Vertex (,) Max or Min x-Intercepts (,)(,) y-Intercept (,)
5. $f(x) = -3x^2 + 6x - 2$ Vertex (,) Max or Min x-Intercepts (,)(,)	6. $f(x) = -x^2 - 4x - 4$ Vertex (,) Max or Min x-Intercepts (,)(,)

y-Intercept (,)	y-Intercept (,)
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7. $f(x) = 3x^2 + 2x - 2$ Vertex (,) Max or Min x-Intercepts (,)(,) y-Intercept (,)	8. $f(x) = 5x^2 - 65x - 150$ Vertex (,) Max or Min x-Intercepts (,)(,) y-Intercept (,)
9. $f(x) = -x^2 + 6x - 5$ Vertex (,) Max or Min x-Intercepts (,)(,) y-Intercept (,)	10. $f(x) = 2x^4 + 7x^3 - 15x^2$ x-Intercepts (,)(,) y-Intercept (,)
11. $f(x) = x^4 - 50x^2 + 49$ x-Intercepts (,)(,) y-Intercept (,)	12. $f(x) = 1/2x^2 - 4x - 6$ Vertex (,) Max or Min x-Intercepts (,)(,) y-Intercept (,)

13. $f(x) = 21 + 14t - 7t^2$ Vertex (,) Max or Min x-Intercepts (,)(,) y-Intercept (,)	14. $f(x) = -4x^2 - 12x + 1$ Vertex (,) Max or Min x-Intercepts (,)(,) y-Intercept (,)
15. Domain and Range of the Following: $f(x) = \frac{\sqrt{14-4x}}{x^2-4}$	16. Domain & Range: $f(x) = \sqrt{9-2x} + \sqrt{x^2-4}$
17. Write a verbal description of the following: “Square, then subtract 5. Graph the above. Restrict the function so that it is one-to-one. Find the Inverse. Graph the restricted function and the inverse. Find $f(f^{-1}(x))$	