

Math 32 Quick Quiz

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<http://math.berkeley.edu/~theo/f/08Fall32/>

Tuesday, September 23, 2008

1. Find the linear function $g(x)$ such that $g(2) = 1$ and the graph of g is perpendicular to the line $6x - 3y = 2$.
2. Find a linear function $f(x) = mx + b$ with m negative such that $(f \circ f)(x) = 4x - 1$.
3. Find the vertex of the parabola $y = x^2 - 2x + 3$.
4. Find the maximum value of the function $f(x) = -x^4 + 4x^2 + 12$.
5. Find the parabola with y -intercept 1 that is symmetric across the line $x = 0$, such that the average rate of change of y on the interval $[0, 1]$ is 2.