

QUIZ 2 - MATH 140

Friday, September 4

YOUR NAME: _____

George Voutsadakis

Read each problem **very carefully** before starting to solve it and do only what is asked. Each problem is worth around 5 points. It is necessary to show **all** your work. Correct answers without explanations are worth 0 points. GOOD LUCK!!

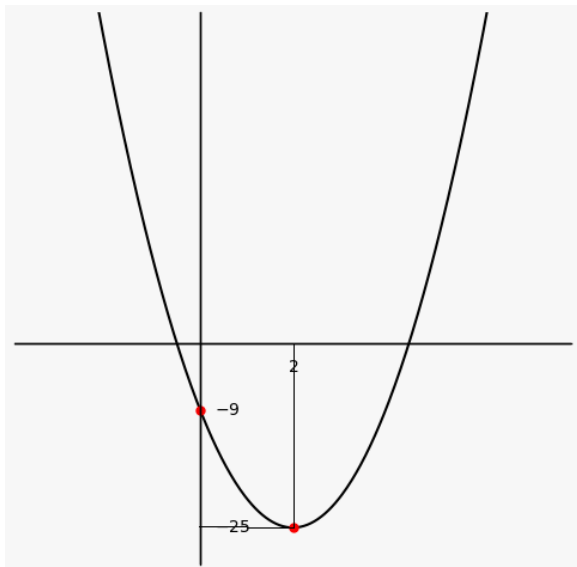
1. [4 points] Let $f(x) = x^2 - 4x - 5$.

(a) Find the vertex and the opening direction.

(b) Find the y - and x -intercepts.

(c) Sketch the graph showing all important points clearly.

2. [4 points] Find an equation in general form for the function whose graph is shown below.



3. [4 points] Consider the two complex numbers $z = 2 + 3i$ and $w = 2 - i$.

(a) Compute zw and $\frac{z}{w}$ and leave your answers in standard form. (Show all steps!)

(b) If $f(x) = 3x^2 - 7x$, find the value $f(2 + 3i)$.