

Quiz 9

This quiz is graded out of 14 marks. No books, watches, notes or cell phones are allowed. You must show all your work, the correct answer is worth 1 mark the remaining marks are given for the work. If you need more space for your answer use the back of the page.

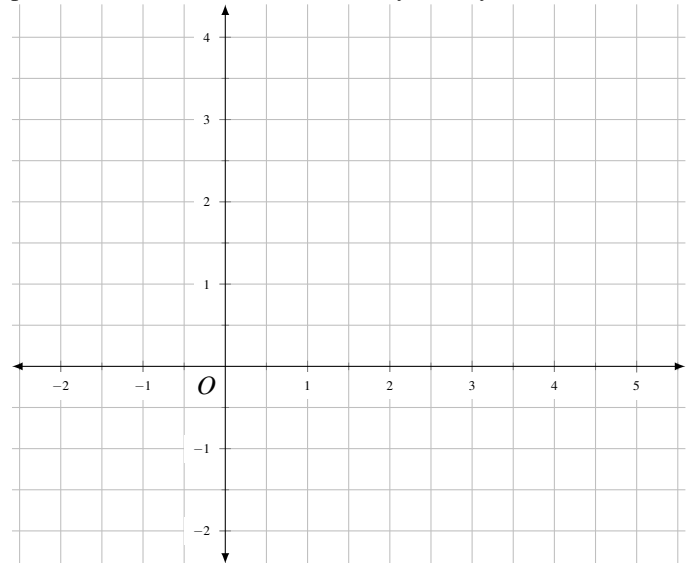
Question 1. Given $f(x) = -x^2 + 4x - 1$.

a. (0.5 mark) Find the y-intercept of $f(x)$.

b. (2 marks) Find the x-intercept(s) of $f(x)$, if any.

c. (1.5 marks) Find the vertex of $f(x)$.

d. (4 marks) Sketch the graph and label $f(x)$ and the points found in part a, b, c. Also sketch the axis of symmetry.



e. (1 mark) State the domain and range of $f(x)$.

Question 2. (5 marks) Find the intersection(s) of the following graphs: $y = -x^2 + 4x - 1$ and $y = x - 1$. Write the intersection(s) as ordered pairs. Sketch the line using the points of intersection(s) on the same axes as Question 1d.