Please read the following instructions carefully:

- There are **two problems** in this quiz.

- The point distribution is given in the table below.

- Please write each solution on a seperate page.

- This is a group quiz. Feel free to discuss the problems with your teammates. **You must, however, write and turn in your own work.**

- Upload your work to Gradescope.

Question:	1	2	Total
Points:	5	5	10

1. (5 points) If you hire x workers for a project, your total cost (in dollars) is given by

$$C(x) = 3x^2 - 12x + 60$$

What value of x minimizes your cost? Confirm that the value of x you find is actually a relative minimum.

2. (5 points) Consider the function
$$f(x) = x^3 - 3x + 1$$

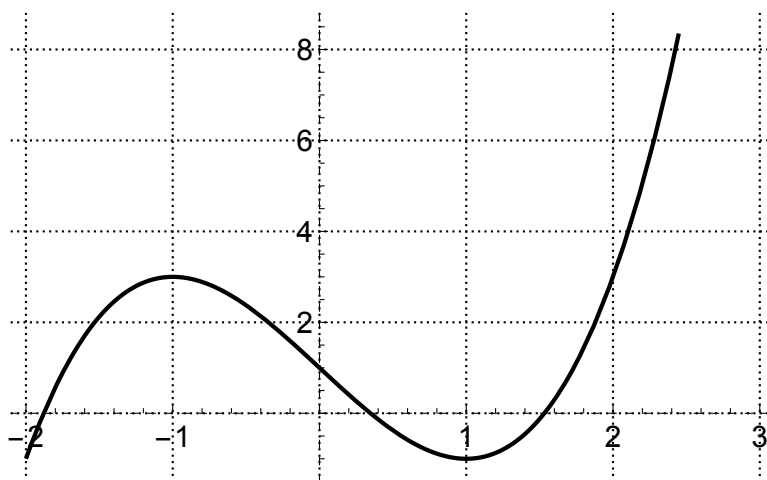Find all critical points and inflection points of the function. Plot the graph of the function using calculus.

Figure 1: Graph of $f(x) = x^3 - 3x + 1$