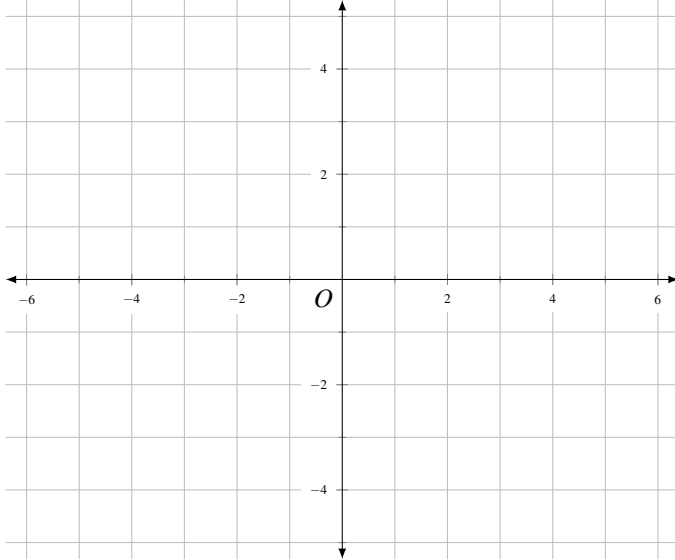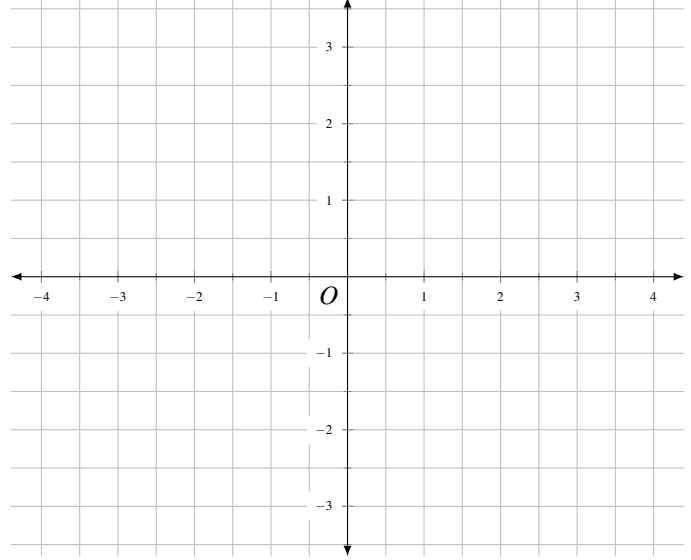**Name:** _____

Quiz 11

This quiz is graded out of 18 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. *(5 marks)* Graph the function (use 3 points) and its asymptote then state the domain and range: $f(x) = \left(\frac{1}{3}\right)^x - 2$

Question 2. *(5 marks)* Graph the function (use 3 points) and its asymptote then state the domain and range: $f(x) = \log_2(x-1)$

Question 3. *(4 marks)* Solve for x: $27^{x-8} = \left(\frac{1}{3}\right)^{x+4}$

Question 4. *(4 marks)* Solve for x: $\log_3(x^2 - 13) = 1$