

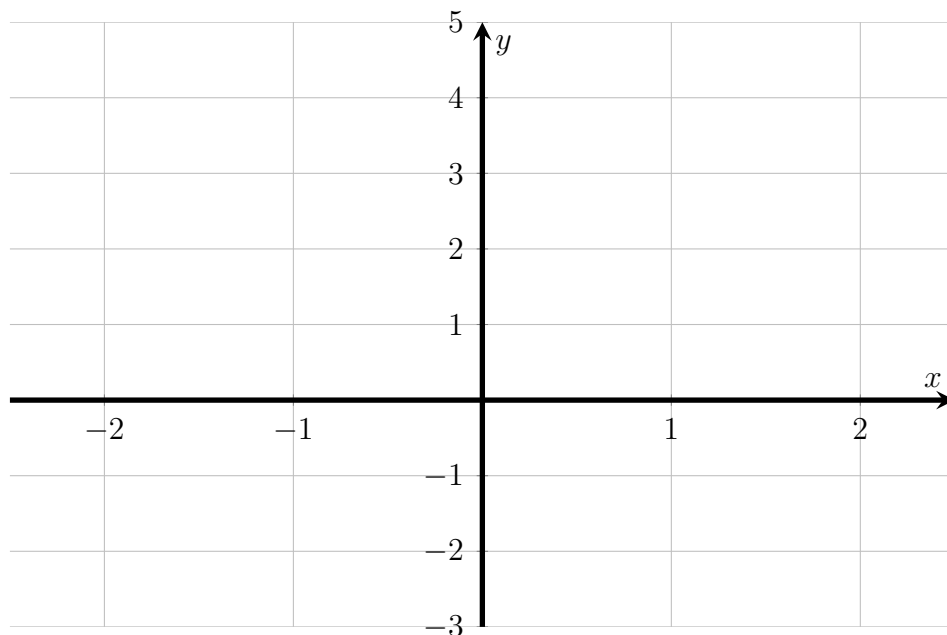
1. Consider the function  $f(x) = x^4 - 5x^2 + 4$

(a) Find the zeros of  $f$ .

(b) On what intervals is  $f$  increasing/decreasing? Find and classify all local extrema of  $f$ .

(c) On what intervals is  $f$  concave up/concave down? Find any inflection points on the graph of  $y = f(x)$ .

(d) Sketch a graph of  $y = f(x)$  on the axes below using the above information. Include coordinates of all local extrema and inflection points.



2. Find the global extrema of  $g(x) = (x^2 - 2)e^{x^2-2}$  on the interval  $[-2, 3]$