

YOUR NAME: _____

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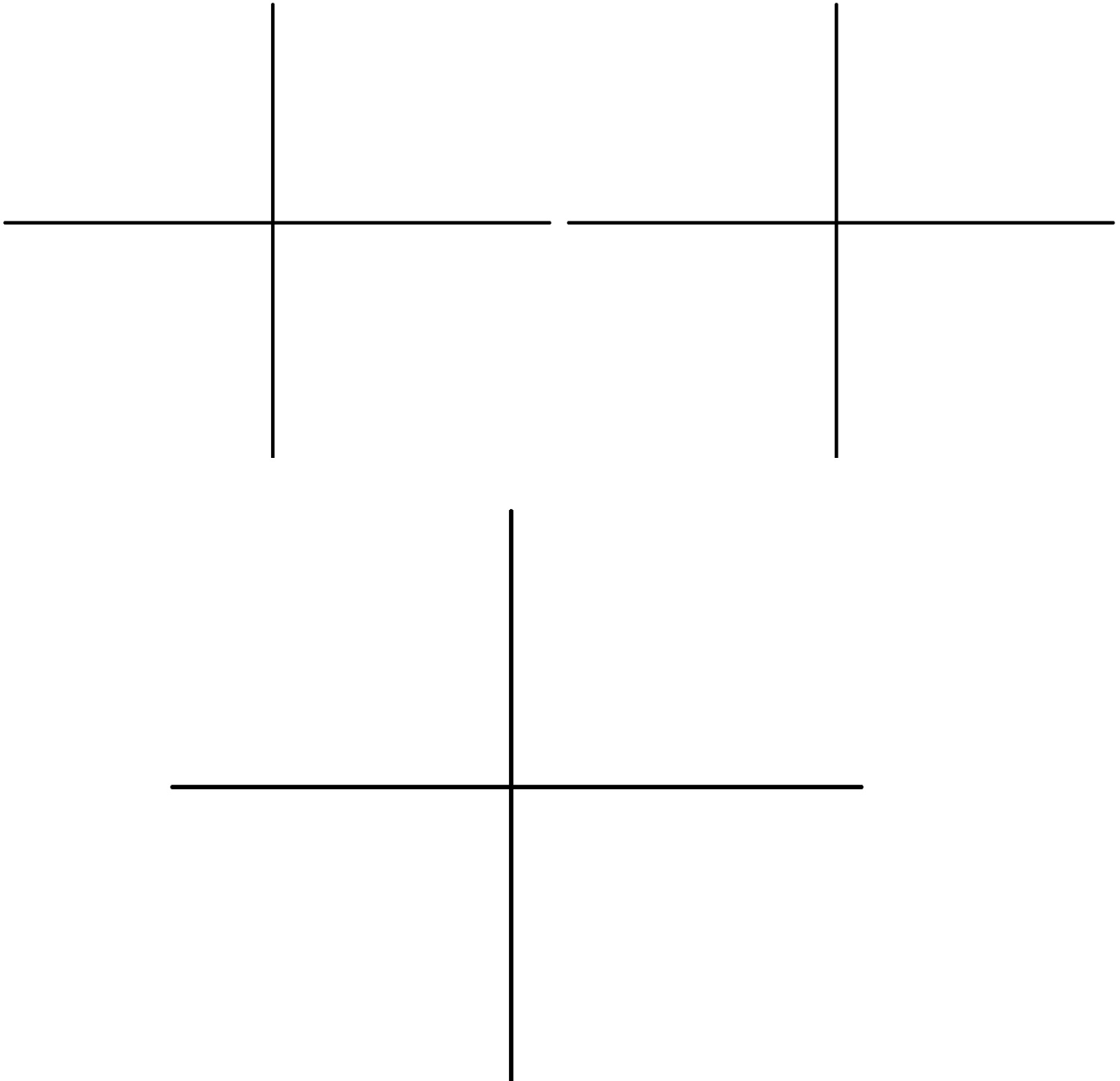
Read each problem **very carefully** before starting to solve it. Each problem is worth 5 points. It is necessary to show **all** your work. Correct answers without explanations are worth 0 points. GOOD LUCK!!

1. Draw the graphs of the following functions in the space provided:

$$f(x) = -x + 1$$

$$g(x) = x^2 - 2$$

$$h(x) = \begin{cases} -x + 1, & \text{if } x \leq 1 \\ x^2 - 2, & \text{if } x > 1 \end{cases}$$



2. Compute the difference quotient of the function $f(x) = 1 - 5x^2$ at x and simplify. Please, **show all details**.