
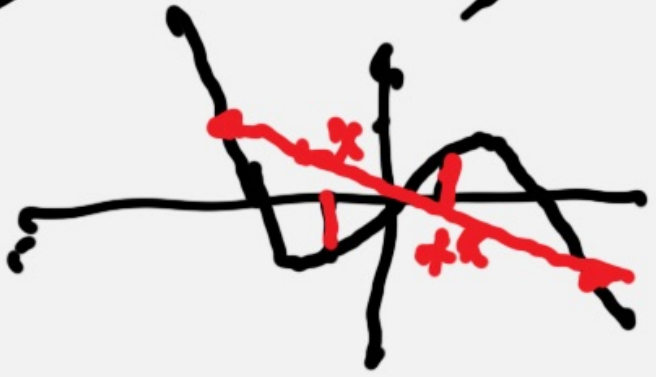


symmetric around y-axis




A hand-drawn graph on a whiteboard showing a function symmetric about the y-axis. The y-axis is labeled 'y'. Two points on the x-axis are marked with red 'x' and labeled '-x' and '+x'. Vertical red lines connect these points to the curve, showing that the function values are equal at both points.

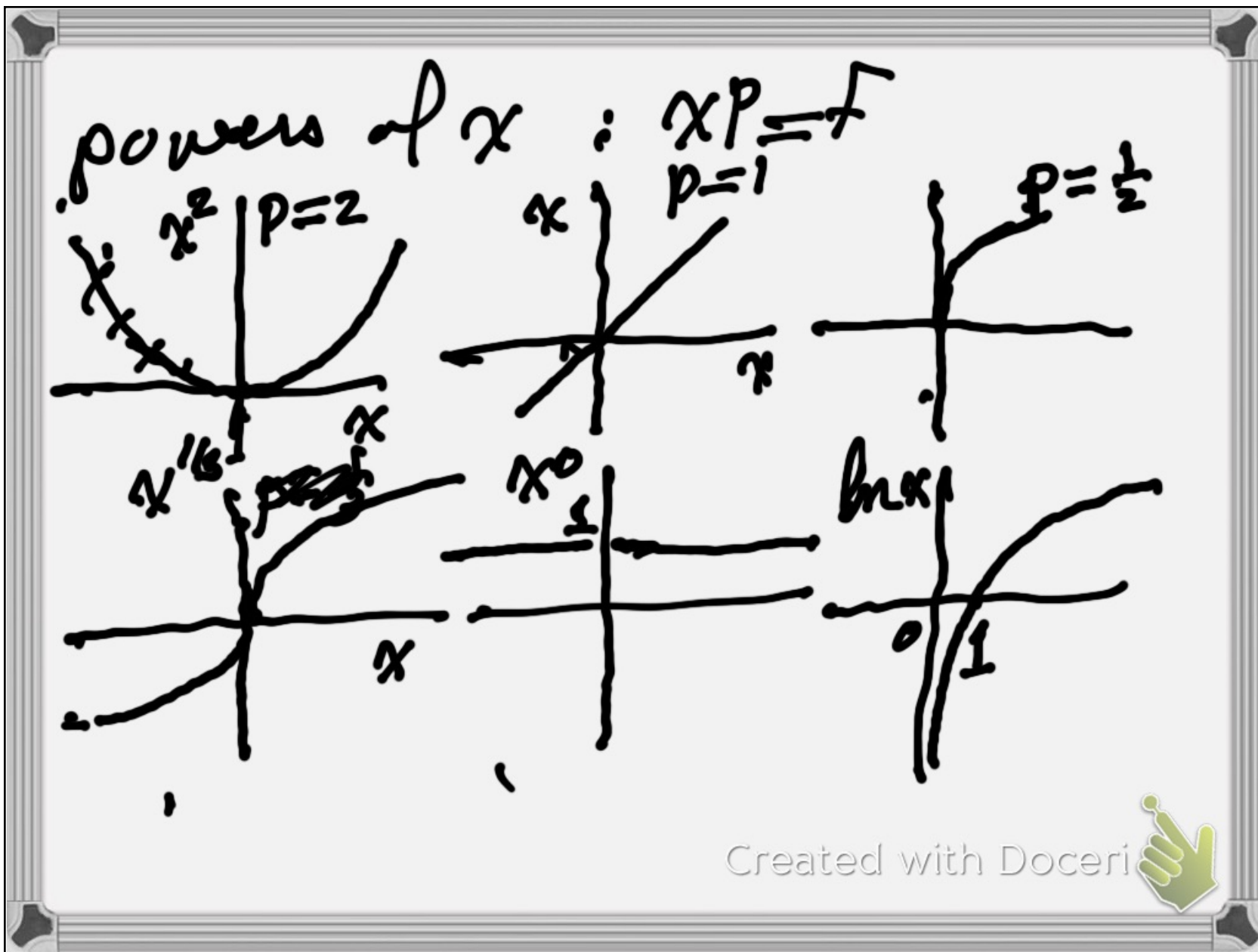
$f(-x) = f(x)$
even



A hand-drawn graph on a whiteboard showing a function symmetric about the origin. A red line is drawn through the origin, representing the line of symmetry. Two points on the x-axis are marked with red 'x' and labeled '-x' and '+x'. Vertical red lines connect these points to the curve, showing that the function values are opposite in sign at these points.

$f(-x) = -f(x)$
odd
antisymmetric
symmetric around
the origin

Created with Doceri 



Example : Analyze ~~$y = (x^2 - 9)^2$~~

$$xy = (x^2 - 9)^2$$

$$y = \frac{(x^2 - 9)^2}{x} = \frac{x^4 - 18x^2 + 81}{x}$$

antisymmetric

$$x^2 - 9 = (x - 3)(x + 3)$$

$(x - x_1)(x - x_2)$

$$y = \frac{(x - 3)^2 (x + 3)^2}{x}$$

∞ at 0
 0 at 3

Created with Doceri 