

— SYMMETRY TESTS —

Y Axis Symmetry (EVEN FCN.)

- * replace x with $-x$
- * See if eqn. is still the same.

EX

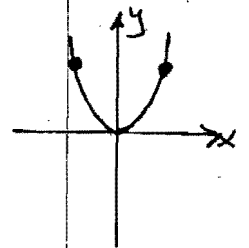
$$y = x^2$$

$$x \rightarrow -x$$

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

$$y = x^2$$

$\therefore$ Y Axis Symmetry



X Axis Symmetry

- * replace y with $-y$
- * See if eqn. is still the same.

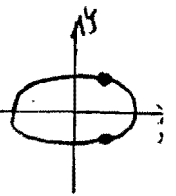
EX

$$\frac{x^2}{25} + \frac{y^2}{16} = 1$$

$$y \rightarrow -y$$

$$\frac{x^2}{25} + \frac{(-y)^2}{16} = 1$$

$$\frac{x^2}{25} + \frac{y^2}{16} = 1$$



Origins Symmetry (ODD FCN.)

- * replace x with $-x$ and y with $-y$ at the same time.
- * See if the eqn. is still the same.

EX

$$y = x^3$$

$$x \rightarrow -x$$

$$y \rightarrow -y$$

$$(-y) = (-x)^3$$

$$-y = -x^3$$

$$y = x^3$$

