

- Show that  $f(x) = 2x^2 + |x|$  is an even function. What kind of symmetry would you expect its graph to display?

$$\begin{aligned} f(-x) &= 2(-x)^2 + |-x| \\ &= 2x^2 + |x| = f(x) \end{aligned}$$

THE GRAPH IS SYMMETRIC ABOUT THE  
Y-AXIS.