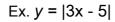
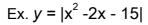
## 7.2 Absolute Value Functions

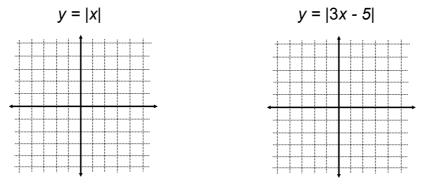
\* The function y = |f(x)| can be defined as the following piecewise function:



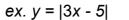




\* Graphically, it looks like the graph of an absolute function "bounces" off the x-axis instead of becoming negative.



\* As with any function, we can obtain the x-intercept by replacing y with 0 and the



y-intercept by replacing x with 0

Ex.  $y = |x^2 - 2x - 15|$ 

\*  $y = x^2 - 2x - 15$  is a quadratic function with zeroes at -2 and 1, a vertex at (-0.5, -2.25), and a y-intercept of -2.

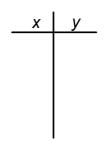
\*  $y = |x^2 - 2x - 15|$  is the same with the exception of it's range... and that weird hump thing.

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Ex.  $y = |-x^2 - 2x + 8|$ 



\* To graph an absolute value function press MATH, then NUM. If you're creating a table of values to graph, try starting at the axis of symmetry for your x-values.



Homefun: pg. 375 #1-5, 6abc, 7, 8abc, 9-13, 16-18, 22-26, 28