1. **Summarize** how to solve an absolute value equation. Include an example and solve the equation symbolically and graphically.

How to solve an absolute value equation:

$|2x+6|-3=11$
$+3 \quad +3$

$|2x+6| = 14$

$\|2x+6\|=14$	$\|2x+6\|=-14$
$2x+6=14$	$2x+6=-14$
$-6 \quad -6$	$-6 \quad -6$
$\frac{2x}{2}=\frac{8}{2}$	$\frac{2x}{2}=\frac{-20}{2}$
$x=4$	$x=-10$

1.) You must get the absolute value alone by itself

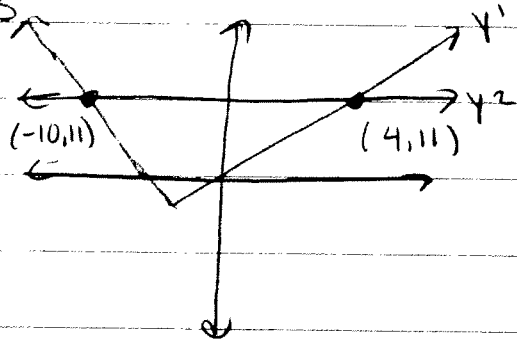
2) then you must write 2 equations to solve for x, because in the graph there's a positive & negative for each value

3.) then you just use algebraic reasoning to get x alone and solve for x

How to solve using a graph:

$Y' = abs(2x+6)-3$

$Y^2 = 11$



Window:
Xmin = -15 Ymin = -20
Xmax = 10 Ymax = 20
Xscl = 1 Yscl = 1

$x = 4 \quad x = -10$