

6.6: Solve Absolute Value Inequalities

- Goals:**
- *Solve a simple absolute value equation
 - *Solve a multi-step absolute value equations
 - *Decide if absolute value equations have no solutions
 - *Use absolute deviation to set up and solve real world problems
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RECALL $|x| = 3$ means....

$|x| < 3$ means....

Solve the inequality and graph your solution:

Ex: $|x| \geq 6$ (Hint: What is the distance between x and 0? How can you write this as two inequalities?)



Ex: $|x| \leq 0.5$

Ex: $|x| < 3.5$



Ex: $|x| \leq 8$

Ex: $|x| > \frac{2}{3}$



Name: _____

Acc Alg

Ex: $|x - 5| \geq 7$

Ex: $|x + 2| > 1$



Ex: $|x + 3| > 8$

Ex: $|2w - 1| < 11$



Ex: $|-4x - 5| + 3 < 9$

Ex: $|2x + 3| - 4 \leq 5$



Ex: $3|5m - 6| - 8 \leq 13$



Ex: You are buying a new computer and find 10 models in a store advertisement. The prices are \$890, \$750, \$650, \$370, \$660, \$670, \$450, \$650, \$725, and \$825.

a) Find the mean price of the computers.

b) You decide you are willing to pay the mean price with an absolute deviation of at most \$100. How many of the computers meet your condition?

Ex: You are on the planning committee for a school dance. Ticket sales for the last ten dances are 133, 178, 205, 220, 186, 142, 138, 204, 216, and 198.

a) Find the mean number of tickets sold.

b) The dance committee estimates they will sell the mean number of tickets with an absolute deviation of at most 40 tickets. What are three possible amounts of ticket sales the committee can expect to sell?