

I. Solve each absolute value equation GRAPHICALLY.

1.) $ x - 2 = -2$	2.) $ 2x + 4 - 4 = -2x + 3$	3.) $2 x + 1 - 3 = 3$
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II. Solve each absolute value equation ALGEBRACIALLY. Must show work on a SEPARATE SHEET!

4.) $ 4 + 8x = 28$ $\{-4, 3\}$	5.) $3 + 2x + 2 = 15$ $\{-7, 5\}$	6.) $6 3 - 4x + 5 = 59$ $\{-\frac{3}{2}, 3\}$
7.) $9 5x + 2 - 7 = -34$ \emptyset	8.) $ 3x + 2 = 4x + 5$ $\{-1\}$	9.) $3 - 5 4x - 1 = 4$ \emptyset
10.) $2 2x + 3 - 10 = 0$ $\{-4, 1\}$	11.) $\frac{8 - 6 - 3x }{4} = 2$ $\{2\}$	12.) $3 2x + 7 = 3x + 12$ $\{-\frac{1}{3}, -3\}$

III. Complete each compound/absolute value word problem. Must show work!

13.) A machine is used to fill each of several bags with 16 ounces of sugar. After the bags are filled, another machine weighs them. If the bag weighs 0.3 ounce more or less than the desired weight, the bag is rejected. What is the heaviest bag the machine will approve?	14.) The atmosphere of Earth is divided into four layers based on temperature variations. The troposphere is the layer closest to the planet. The average upper boundary of the layer is about 13 km above Earth's surface. This height varies with latitude and with the seasons by as much as 5 km. What are the minimum and maximum heights of the upper bound of the troposphere?	15.) A meat thermometer is used to assure that a safe temperature has been reached to destroy bacteria. Most meat thermometers are accurate within plus or minus 2°F. A ham is baking in an oven and needs to reach an internal temperature of 160°F. What temperature on the thermometer will represent the lowest temperature of the ham?
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The heaviest bag is 16.3 oz.

The maximum height is 8 km and the minimum height is 18 km.

The lowest temperature of the ham will be 158°F.