

Teaching Notes For Homework #6

Absolute Value

Absolute value bars are a grouping symbol that has no meaning to students, so instead we call them super powered parenthesis. Because we treat them like parenthesis, and they have a super power that allows them to do something special. Their super power is that they change everything inside of them into a positive. Once they use their super power the straight up and down bars lose their power and become regular parenthesis.

$$\text{Example: } -|-8+2| \rightarrow -1|-6| \rightarrow -1(6) \rightarrow -6$$

Practice Absolute Value Problems:

- Simplify: $-|-6+1| + \sqrt[5]{32} - 7^0$
- Simplify: $-|-4+3| - 2|-2-3| + 3|-7|$
 - It can be challenging to tell what is inside the bars. Building houses makes it very clear. Start at the first bar and draw a roof between the first and second bars. Be sure to leave room for the yard and then build another house.

$$-\overbrace{|-4+3|} - 2\overbrace{|-2-3|} + 3\overbrace{|-7|}$$

Like this:

- Simplify: $-5|-1-1| - 3|-4+8| - |-9| - 4$
- Simplify: $-|-2-1|^3 - |-3(-2-2)-5| - |-4+6|$
- Simplify: $-3^0 - |-3-3| - 2|-8+9| + 3|-5+8|^3$

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