



# 7<sup>TH</sup> GRADE TI-84 ACTIVITY 21: IT IS ABSOLUTE

## ACTIVITY OVERVIEW:

In this activity we will

- Learn about the absolute value function by investigation

How far is it from where you live to Chicago? If you look this up online, it will give you a distance. Does it matter whether you start in your town or Chicago? No, the distance is the same.

The absolute value function works the same way. A function is like an operation. It does something when you apply it to numbers. The symbol for absolute value is two bars around a number or expression. There are some examples of what absolute value looks like on the right.

$|5|$

$|20-8|$

$|2+-60|$

On the TI-84, the absolute value function can be found on the NUM menu on the **MATH** key or in the catalog by pressing **2nd**[CATALOG].

```

MATH NUM PRB LOG
1:abs(
2:round(
3:iPart(
4:fPart(
5:min(
6:max(
7:remainder(

```

Press **ENTER** once you have found the absolute value function. Enter each of these numbers on the right, one at a time and see what values you get. You can use your up arrow key to copy the function. Press **ENTER** to paste it.

Abs(-10), Abs(10)  
Abs(4.5), Abs (-4.5)  
Abs(-100), Abs (100)  
Abs(1), Abs(-1)

What did you notice? If you find the absolute value of 10 or -10, what is the result? What would happen if you find the absolute value of expressions that have opposite values? Try all of the problems at the right. What do they have in common? How can you tell?

$Abs(10-18)$   
 $Abs(-8)$   
 $Abs(20-12)$   
 $Abs(0-8)$   
 $Abs(-50+58)$

Now, find six different expressions that have an absolute value of 20. Write the expressions on the lines on the right.

_____	_____
_____	_____
_____	_____

Another way to think about absolute value is “how far is the number from 0?” This is another reason why the absolute value of any number or expression is positive.

What number would not have a positive absolute value?  
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