

Math 8
Winter 2020

Written Homework
Assigned Friday, February 21

Note: Standard (not preliminary) written homework is graded on your work and your explanations, not just on your answer.

Explanations are important for many reasons. Being able to communicate what you know shows a depth of understanding beyond that of being able to get the right answer to a problem. Doing the mental work of putting explanations into words helps create that depth of understanding. On exams, we will grade your work and not just your answers, so this is good practice for taking exams.

For all these reasons, be sure to: show all your work; explain your reasoning; use clear English; write neatly so all this effort does not go to waste.

Written homework is always due at 10:00 AM on the following Monday.

Assignment: A study of the effectiveness of foam insulation placed giant foam blocks, originally at a uniform temperature of 80 degrees, into a refrigerated room maintained at 0 degrees, and studied the function $f(x, t)$, the temperature at a depth x millimeters into the block after t minutes in the refrigerated room.

At the values $t = 10$ and $x = 2$:

1. Would you expect the partial derivative $\frac{\partial f}{\partial t}$ to be positive or negative? Why?
2. Would you expect the partial derivative $\frac{\partial f}{\partial x}$ to be positive or negative? Why?