

For my cutting board project I constructed the image above using a compass and straightedge like Euclid did. The main constructions I used were constructing a right triangle, copying a segment, constructing a hexagon, constructing a perpendicular bisector, copying an angle, and constructing circles. I constructed it by hand and then constructed it on the computer using Adobe Illustrator. I preferred the more modern tool of Illustrator because it was more precise but I do see the value of getting to use new tools like compasses and straightedges.

breaking bread

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In this project I investigated how I could mathematically:

1. Graph the dietary fiber changes from seed to loaf to better understand the scientific processes at work in each of these steps
2. Use bakers percentages to know how much of an ingredient I should use in the recipe
3. Use a straight edge and compass to construct an appealing design



On our first day back from intersession, we were welcomed back into our classrooms with long tables covered in white cloth and a variety of breads accompanied with sides. This meal is what started our whole project of baking bread.



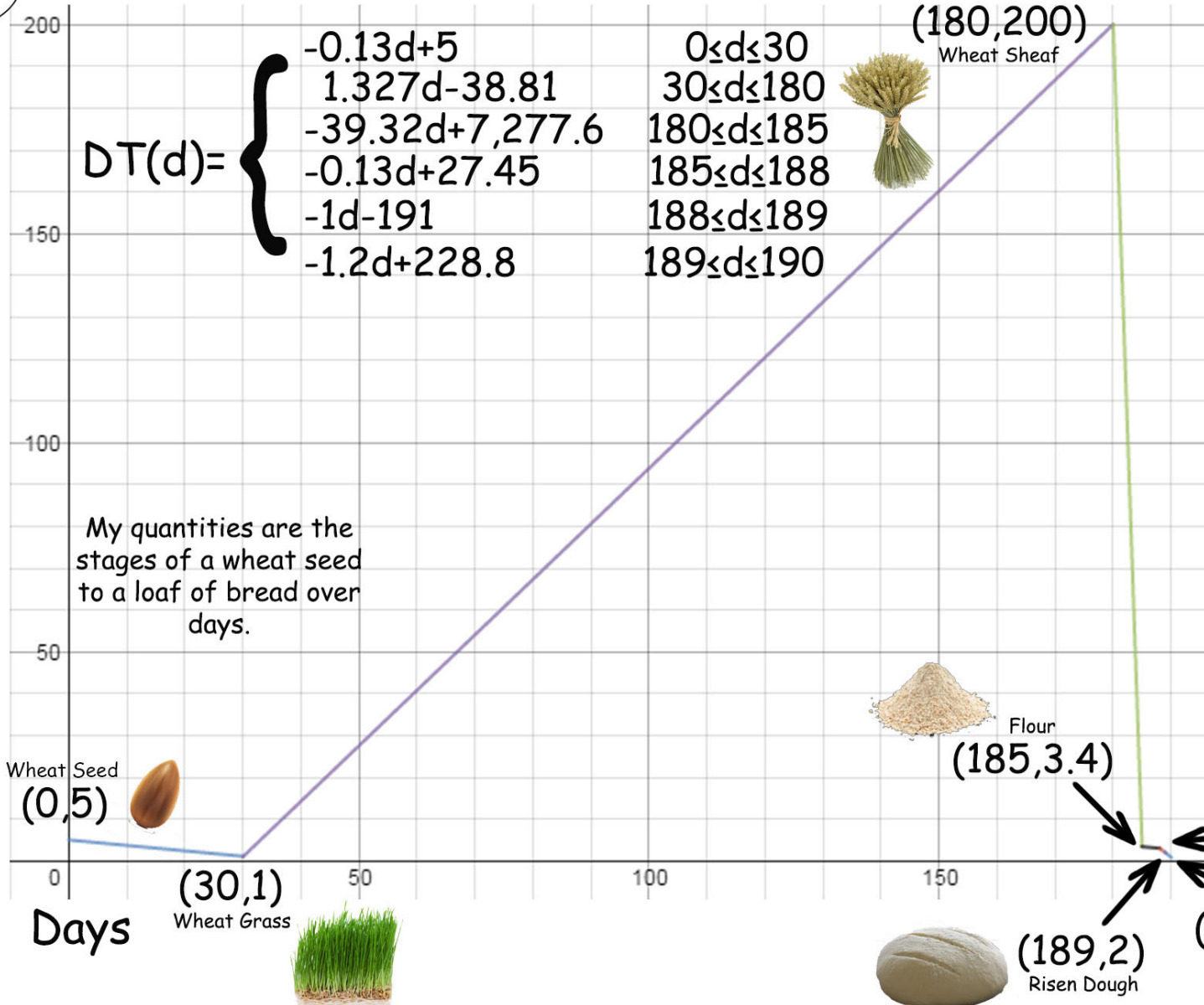
Once we were put into groups for the final project, we began to bake our ideal bread. My group's most recent bread looked lovely. It had a nice smooth golden-brown crust and the crumb was soft and sweet. It tasted better with the cinnamon inside of it. The loaf had a 60% hydration and a 18% sugar.

Dietary Fiber Comparison Over Days

Eat Your Fiber!



Dietary Fiber



$$DT(d) = \begin{cases} -0.13d+5 & 0 \leq d \leq 30 \\ 1.327d-38.81 & 30 \leq d \leq 180 \\ -39.32d+7,277.6 & 180 \leq d \leq 185 \\ -0.13d+27.45 & 185 \leq d \leq 188 \\ -1d-191 & 188 \leq d \leq 189 \\ -1.2d+228.8 & 189 \leq d \leq 190 \end{cases}$$

My quantities are the stages of a wheat seed to a loaf of bread over days.

A positive slope means an increase in Dietary Fiber. One example are the points 30,1 to 180,200. A grass to wheat is a big difference in fiber since the wheat takes time to collect a lot of nutrients.

A negative slope means a decrease in Dietary Fiber. One example is 180,200 to 185,3.4. The fiber goes down gradually since turning a sheave into flour makes the wheat loose its fiber.

