

Seeing is believing and believing is knowing and knowing beats unknowing and the unknown. -- Philip Roth

The study was based on the hotdog eating contest trends of west vs. east coast participants at various national country fairs from 2010 to 2020. Researchers wanted to know if contest performance (number of hotdogs eaten) was related to specific ingredients of the hotdogs (beef: ground up beef lips vs. chicken: ground up chicken beaks). The dependent variable was the **average number of hotdogs eaten** by contest winners for each year examined.

There were three factors (2x2x3). All factors are between subjects.

Levels of factor-1 (Ingredients) were Beef (ground up beef lips) & Chicken (ground up beaks).

Levels of factor-2 (Coast) were West & East.

Levels of factor-3 (Year) were 2010, 2015, & 2020.

Your assignment is to graph the main effects and interactions of this study (i.e., **seven** graphs total, **no more than two per page**). Specifically, you should have:

- (a) Three different graphs which depict the three possible main effects.
- (b) Three different graphs which best depict the three possible two-factor interactions.
- (c) A single graph which best depicts the three-factor interaction (i.e., the raw data below).

For this assignment, PLEASE **ROUND VALUES TO NEAREST WHOLE NUMBERS**, also if you are not using a computer to print your graphs, then *you must* use graph paper (see the class handouts webpage if you need graph paper). **Due Tuesday after break (start of class).**

Graph #7:

	<u>East</u>			<u>West</u>			
Beef	15	18	14	Beef	15	15	20
Chicken	25	5	20	Chicken	10	5	28
	2010	2015	2020		2010	2015	2020

Calculate means for the 3 main effects and the 3 two-factor interactions (round to whole numbers).

#1

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 Ingredients

#2

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 Coast

#3

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 Year

4

East West
Beef Lips
Chicken Beaks

#5

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 Beef-Lips
Chicken Beaks

↑ ↑ ↑

2010 2015 2020

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#6

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 East
West

#7 For the 3-factor, plot the data provided above.