Carefully read the description of the experiment below. Be prepared to answer the questions that follow the design description as a class quiz.

This study examined the effects of water, both served with a food and incorporated into a food, on satiety. Four lean women consumed breakfast, lunch, and dinner in our laboratory 1 d/wk for 4 wk. Subjects received 1 of 3 preloads 17 min before lunch on 3 of the days and no preload on the other day (control). The **preloads** consisted of 1) chicken rice casserole, 2) chicken rice casserole with a glass of water, 3) chicken rice soup and

	Week 1	Week 2	Week 3	Week 4
Woman 1	Soup	Control	Casserole+water	Casserole
Woman 2	Casserole+water	Casserole	Control	Soup
Woman 3	Control	Soup	Casserole	Casserole+water
Woman 4	Casserole	Casserole+water	Soup	Control

(4) a no preload control. The soup contained the same ingredients (type and amount) as the casserole that was served with water.

Lunch consisted of a large variety of items. To avoid the possibility of subjects eating to "clean their plates," we presented more food than they were likely to consume. During all meals, subjects were instructed to eat as much of any food item as they wished and to ask for more if desired. All food items were weighed before and after consumption to obtain the amount consumed.

The four **women** were randomly administered the **preloads** over 4 days (a week apart) such that each woman received each preload once and each preload occurred once in each **week**. The table shows the manner in which the four diets (3 preloads and a control) were applied. The whole experiment was actually replicated 6 times on different women (24 total), but **for our purposes let's suppose it was done just once on 4 women over 4 weeks**. The variable of interest is the **energy intake** for each woman from each meal.
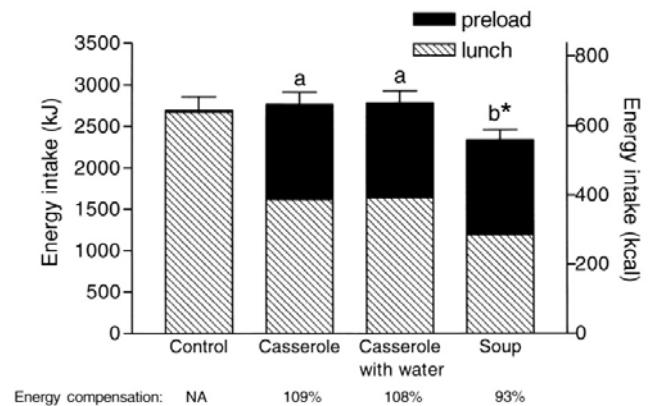
Answer choices:	(A) preload	(B) week	(C) woman "i" in week "j"
	(D) replicate	(E) subject	(F) intake energy

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Name _____ **Quiz Number** ____ **Date** _____ / _____ / _2012_

Circle the appropriate letter for each question.

1) What is the experimental unit for this experiment?   A   B   C   D   E   F

2) What is the sampling unit for this experiment?   A   B   C   D   E   F

3) What is the dependent variable for this experiment?   A   B   C   D   E   F

4) What is the treatment variable for this experiment?   A   B   C   D   E   F

5) If the design is RBD, what are the blocks?   A   B   C   D   E   F   NA

6) Does it seem more likely that the treatments are fixed or random?   (A) fixed   (B) random

7) What is the treatment arrangement for this experiment?   (A) single factor   (B) factorial   (C) nested

8) What is the experimental design?   (A) CRD   (B) RBD   (C) LSD   (D) Split-plot   (E) Repeated Measures

9) The treatment degrees of freedom are _____ .

10) The degrees of freedom for the error used for testing treatments are _____ .