

Proportions

Cara and Jeff are going to cater the Nelson family reunion. Their recipe for potato salad serves 10 people. How much of each ingredient will they need to make enough potato salad for 75 people?

Mustard Potato Salad	
½ c light mayonnaise	¼ t salt
2 T Dijon mustard	⅛ t pepper
2 T sweet pickle relish	5 c cooked potatoes
1 T white vinegar	¼ c minced parsley
Combine the first six ingredients in a large bowl. Add potatoes and toss. Cover and chill overnight. Garnish with parsley. Serves 10.	

You can find the amount of each ingredient needed by using a spreadsheet.

Try this

Work with a partner to create a spread sheet.

B1 is the number of people, and the number of servings per batch is 10. So the number of batches needed is $\frac{B1}{10}$, which is given in cell B2. For each ingredient, you will use a formula that multiplies cell B2 by the amount of each ingredient listed in the recipe. (Fractions have been changed into decimals)

The formula in cell B4 takes the number of batches needed and multiplies it by $\frac{1}{2}$ or 0.5, the amount of mayonnaise needed for one

batch. The result is the total amount of mayonnaise needed to make enough potato salad for 75 people. (As you enter the formula, the computer will compute the amount needed for serving 75)

	A	B	C
1	People to Serve	= B1	
2	Batches needed	=(B1/10)	
3	INGREDIENT		
4	Mayonnaise	=(B2*0.5)	cups
5	Mustard	=(B2*2)	T.
6	Relish	=(B2*2)	T.
7	Vinegar	=(B2*1)	T.
8	Salt	=(B2*0.25)	tsp.
9	Pepper	=(B2*0.125)	tsp.
10	Potatoes	=(B2*5)	cups
11	parsley	=(B2*0.25)	cups

After you have entered all of the formulas, copy and paste the information lower on your spreadsheet. You can change the number for People to Serve, and the ingredient amounts will change. You need to find out the ingredients for 120 people, servings to feed this class, and your family if the original ingredients will feed 6.

Answer the following questions:

1. Explain the formula in cell B6.
2. Using the results of the spreadsheet for 75 people, write each ingredient amount needed as a fraction in simplest form.
3. Use the spreadsheet to find the amount of each ingredient needed to make enough potato salad for 120 people. Write each ingredient amount as a fraction in simplest form.
4. How would you change the spreadsheet if one batch of potato salad served 12 people?
5. Use the spreadsheet to find the amount of each ingredient needed to make potato salad for the number of people in your class. Write each ingredient amount as a fraction in simplest form.
6. Use the spreadsheet to find the amount of each ingredient needed to make potato salad for your family if the original recipe serves 8 instead of 10. Write each ingredient amount as a fraction in simplest form.