

Appendixes



Instructions: How to use the Recipe Analysis Workbook (RAW)

The Recipe Analysis Workbook (RAW) is a tool used to determine the expected meal pattern contribution and crediting statement for a recipe. The RAW consists of a worksheet (or tab) for each meal component. The worksheets, in hard copy format, are located at the end of this Appendix, Figures 1a–1g. This workbook is a tool for calculating the meal pattern contribution of a recipe's ingredients toward the vegetables (expressed in subgroups), fruits, meats/meat alternates, and grains components of the Federal meal pattern requirements. The fluid milk component is not included. The RAW is also available in a spreadsheet format upon request to the CNP-NTAB mailbox at cnpntab@usda.gov and an interactive, web-based RAW is available at https://foodbuyingguide.fns.usda.gov. Use of this workbook in the interactive web-based format is recommended to obtain the maximum benefit; however, the examples in this appendix are tailored to both the spreadsheet and hard copy format for your convenience.

Documenting meal pattern contributions for recipes is an important step in ensuring that meals served are nutritious and meet Federal meal pattern requirements. The RAW provides the specifics for determining the meal pattern contribution of a recipe served in the National School Lunch Program (NSLP) and School Breakfast Program (SBP). The information may also be used to determine the meal pattern contribution of recipes served in the Child and Adult Care Food Program (CACFP), Summer Food Service Program (SFSP), and NSLP afterschool snack service (NSLP aftershcool snacks). The total amount from each of the vegetable subgroups can be combined to determine the vegetables component for the CACFP meal pattern.

The total amount from the fruits and vegetables subgroups can be combined to determine the vegetables/fruits component for the SFSP. While the SFSP is not required to calculate grain items using ounce equivalents, ounce equivalents may be used.

The following text outlines steps for completing the RAW. Note, if your recipe does not contain an ingredient for a component, you will not complete that worksheet.

Tips for completing the RAW:

- Use a calculator.
- Record calculations out to four decimal places without rounding.

Steps to Complete the Interactive Web-Based Tool Recipe Analysis Workbook (RAW)

1. Recipe Name

Record the name of the recipe at the top of the RAW.

2. Servings per Recipe

Record the total number of servings a recipe yields. For example, if your recipe yields 100 servings, enter "100" in this space.

3. Recipe Number

If your recipe is numbered, record the number at the top, otherwise, leave it blank.

A-1



4. Serving Size

Record the serving amount per portion (e.g., ½ cup, 1 piece, 1 sandwich, ¾ cup).

5. Search Food Ingredients

Using the "Keywords" field, search for the creditable recipe ingredients as found in the "Food Buying Guide for Child Nutrition Programs" (FBG). If an exact match is not available, choose a food item in the FBG that closely matches your recipe ingredient. Do not list ingredients that do not contribute to a meal component, such as oils, spices, and herbs.

6. Quantity of Ingredient

On the corresponding meal component tab, record the weight or volume measure of each ingredient in the same unit of measure as the purchase unit listed in the FBG. For example, when the purchase unit is listed in pounds, convert the ounces of your ingredient to the decimal equivalent of a pound and record this number. (See "Decimal Weight Equivalents" Table 5 on page I-24 in the FBG).

See page A–32 for instructions on completing the grains component.

7. Preparation Yield

Record the preparation yield factor for the ingredient that is provided in "Additional Information." The preparation yield factor should only be used when a recipe ingredient needs to be converted to match the form of the item as listed under "Food As Purchased," Column 1 of the FBG.

For example, a recipe contains 10 pounds of eggplant, raw, pared, cubed but the FBG only provides data for eggplant, fresh, whole in the "Food As Purchased," Column 1. Convert the weight of the eggplant, raw, pared, cubed to the weight of eggplant, fresh whole to determine the amount of eggplant to purchase.

In the FBG, "Additional Information," for eggplant, fresh whole states, "1 lb AP = 0.81 lb ready-to-cook eggplant," meaning that 1 lb as purchased fresh, whole eggplant yields 0.81 lb of ready-to-cook eggplant after it has been peeled and cubed.

Record the 0.81 lb preparation yield factor.

If several options are available in "Additional Information," choose the yield data that most closely matches the form of the recipe ingredient.

If you are unsure if a preparation yield is necessary, use the "When to Use a Preparation Yield" interactive flow chart, located under the "Tools" menu. Please view the training video, "Chapter 3B: The Recipe Analysis Workbook," for further detailed instruction on how to complete the RAW in the FBG Web Tool.

Steps to complete the Recipe Analysis Workbook Templates and Spreadsheet (Figures 1a–1g)

Note: When completing the templates and spreadsheet, the FBG columns referenced are referring to the downloadable yield tables and not what is seen in the FBG Interactive Web-Based Tool (FBG Web Tool), which does vary.

1. Recipe Name

Record the name of the recipe at the top of each worksheet.

2. Servings per Recipe

At the top of each worksheet, record the total number of servings a recipe yields. This number will be the same for each of the component worksheets. For example, if your recipe yields 100 servings, enter "100" in this space.

3. Recipe Number

If your recipe is numbered, record the number otherwise, leave it blank.

4. Serving size

Record the serving amount per portion (e.g. $\frac{1}{2}$ cup, 1 piece, 1 sandwich, $\frac{3}{4}$ cup, etc.) on each worksheet. This amount will be the same for each of the component worksheets.

5. Search Food Ingredients

In Column (a), list the creditable recipe ingredients as found in the FBG on each applicable meal component worksheet. If an exact match is not available, choose a food item in the FBG that closely matches your recipe ingredient. Do not list ingredients that do not contribute to a meal component, such as oils, spices, and herbs.

6. Quantity of Ingredient

In Column (b), record the weight or volume measure of each ingredient in the same unit of measure as the purchase unit listed in the FBG. The quantity specified on the worksheet must be in the same unit as specified under "Purchase Unit," Column 2 of the FBG. For example, when the purchase unit in Column 2 of the FBG is listed in pounds, convert the ounces of your ingredient to the decimal equivalent of a pound and record this number. (See "Table 5 in the FBG "Decimal Weight Equivalents").

See page A–32 for instructions on completing the grains component.

7. Preparation Yield

In Column (c), record the preparation yield factor for the ingredient that is provided in "Additional Information," Column 6 of the FBG. The preparation yield factor should only be used when a recipe ingredient needs to be converted to match the form of the item as listed under "Food As Purchased," Column 1 of the FBG.

For example, a recipe contains 10 pounds of eggplant, raw, pared, cubed but the FBG only provides data for eggplant, fresh whole in the "Food As Purchased," Column 1.

Convert the weight of the eggplant, raw, pared, cubed to the weight of eggplant, fresh whole to determine the amount of eggplant to purchase.

In the FBG, "Additional Information," Column 6 for eggplant, fresh whole states, "1 lb AP = 0.81 lb ready-to-cook eggplant," meaning that 1 lb as purchased fresh, whole eggplant yields 0.81 lb of ready-to-cook eggplant after it has been peeled and cubed.

Record the 0.81 preparation yield factor in Column (c).

If several options are available in "Additional Information," Column 6, choose the yield data that most closely matches the form of the recipe ingredient.

If you are unsure if a preparation yield is necessary, use the "When to Use a Preparation Yield" interactive flow chart, located under the "Tools" menu of the FBG Web Tool.



Note: Steps 8–9 apply only if you are completing the RAW templates and spreadsheet. The RAW in the FBG Web Tool does the following math for you by automatically including the servings per purchase unit, calculating the quantity to purchase, and totaling the meal pattern contribution for all meal components.

8. Calculated Quantity to Purchase

In Column (d), record the answer from dividing the number in Column (b) by the number in Column (c). Continuing with the eggplant example above, the calculation is as follows:

- · Record 10 lb in Column (b), "Quantity of Ingredient"
- Record 0.81 lb in Column (c), "Preparation Yield Column 6 in FBG"
- Divide: 10 lb ÷ 0.81 lb = 12.3456 lb
- Record "12.3456" in Column (d), "Calculated Quantity to Purchase"
- 12.3456 lb of fresh, whole eggplant needs to be purchased for the recipe to yield 10 lb of eggplant, raw, pared, cubed.

For other examples using "Additional Information," Column 6 yield data, see calculation examples from Method 3 on pages I-47 through I-49 of the FBG. You may also refer to Appendix B: How to Use Column 6 in the FBG for further information on determining yields of prepared/ready-to-serve/ready-to-cook ingredients.

9. Servings per Purchase Unit

In Column (e), record the number of servings per purchase unit of the ingredient. This information is found in "Servings per Purchase Unit," Column 3 of the FBG. The number of servings per purchase unit varies for different preparation methods or forms of the ingredients as served. Therefore, you should pay particular attention to the description of the food as served when selecting the number of servings per purchase unit to use in the calculation. The description of the form of the food should most closely match that of the food after preparation and as it is served. For example, if a recipe ingredient is Cauliflower, fresh, florets, ready-to-use and the cauliflower is then cooked when preparing the recipe, use the information in "Servings per Purchase Unit," Column 3 of the FBG for cooked, drained vegetable florets, which is 14.1.

10. Totals

In Column (f), record the answer of Column (b) multiplied by Column (e) OR if a preparation yield factor is used, Column (d) multiplied by Column (e). After calculating this amount for each ingredient, add the amounts together and enter the sum in the Totals space at the bottom of each worksheet.

To finish the remaining calculations, see the following specific instructions for a complete example of each meal component.

Practice Using the Recipe Analysis Workbook

Now that we have covered the basics of using the RAW, let's practice with the following recipe examples. Ingredients listed below in red are creditable and contribute toward the meal pattern requirements.

Ingredients	Weight	Measure
Water		3½ cups
Brown rice, long grain, regular, dry	9½ oz	1½ cups
Canola oil		2 Tbsp
Fresh onions, diced	6 oz	1¼ cups
Fresh celery, diced	14 oz	3 cups
Fresh garlic, minced	2½ oz	¼ cup
Raw ground turkey, lean	6 lb 15½ oz	3 qt 2 cups
Liquid, whole egg		2 ¹ / ₂ cups
Dried cranberries, chopped	12 oz	21/2 cups
Fresh baby spinach, chopped	10 oz	2 qt
Worcestershire sauce		2 Tbsp
Salt		1 Tbsp
Ground black pepper		1 Tbsp 1 tsp
Ground white pepper		½ tsp
Mini whole grain rolls (1 oz each)		50

Porcupine Sliders (turkey burgers), 50 servings



Harvest Delight (vegetable and fruit side dish), 50 servings

Ingredients	Weight	Measure
Fresh carrots, ¼" slices	3 lb	2 qt 2 cups
Fresh sweet potatoes, peeled, cubed 1"	3 lb	1 qt 2 cups
Fresh butternut squash, peeled, cubed ½"	3 lb	1 qt 2⅔ cups
Fresh red onions, diced	1 lb	3 cups 2 Tbsp
Extra virgin olive oil		⅔ cup
Sea salt		2 tsp
Fresh green apples, peeled, cubed ½"	4 lb	3 qt 2⅔ cups
Fresh thyme, finely chopped		3 Tbsp
Fresh oregano, finely chopped		3 Tbsp
Fresh sage, finely chopped		3 Tbsp
Fresh rosemary, finely chopped		2 Tbsp
Minced garlic		2 Tbsp 1 tsp
Maple syrup		¼ cup 1 Tbsp
Fresh spinach, coarsely chopped	11 oz	1 qt 2 cups
Dried cranberries, finely chopped	2 oz	⅓ cup



Confetti Soup (vegetable, bean and turkey ham soup), 50 servings

Ingredients	Weight	Measure
Canola oil		¼ cup 1 Tbsp
Fresh onions, diced	1 lb 14 oz	1 qt 2 cups
Fresh celery, diced	1 lb 14 oz	1 qt 2 cups
Fresh carrots, diced	1 lb 14 oz	1 qt 2 cups
Salt		1 Tbsp 1 tsp
Ground black pepper		1 Tbsp 1 tsp
Fennel seed, whole		2 tsp
Crushed red pepper (optional)		1 tsp
Canned low-sodium black-eyed peas, drained, rinsed	5 lb 10 oz	3 qt 1 cup (1½ No. 10 cans) or 1 gal
Water		1 gal 3 qt
Turkey Ham, extra-lean, diced 1/4"	3 lb	1 qt 2½ cups
Fresh kale, coarsely chopped	4 oz	2½ cups
Fresh parsley, finely chopped		⅔ cup



Vegetables (With Subgroups) Contribution Worksheet (Figure 1a)

Calculate the vegetables (with subgroups) contribution per serving. Follow these steps:

1. Record the ingredient under the appropriate vegetable subgroup heading in "Ingredients," Column (a).

EXAMPLE: The Porcupine Sliders recipe contains fresh baby spinach, chopped. List this ingredient on the worksheet under the Dark Green vegetable subgroup in Column (a), as shown.

Recipe Name:	Porcupine Sli	ders		Sei	vings per Recipe:	50			
Recipe Number:	Sandwiches H	7-10r		Serving Size: 1 slide					
Ingredients (a)	Quantity of Ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) ÷ (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total‡ ¾ cups (b) x (e)= OR (d) x (e)= (f)	Convert to cups (f) ÷ 4= (g)	Total Cups Vegetable per Serving (g) ÷ No. of Servings= (h)	Decimal Eq. to the Nearest Portion of a Cup (i)	Remaining (j)
Dark Green								-	
Fresh baby spinach, chopped						-			
						t			
						T			
						0			
			Dark G	reen Totals	1			-	

2. Enter the ingredient quantity in the "Quantity of Ingredient," Column (b) using the same weight or volume unit found in the "Purchase Unit," Column 2 in the FBG. If the recipe lists the ingredient in a different unit, you must make a conversion before the contribution can be calculated.

EXAMPLE: The Porcupine Sliders recipe contains 10 oz fresh baby spinach, chopped; 6 oz fresh onions, diced; and 14 oz fresh celery, diced. The FBG lists the Purchase Unit as "Pound" for these items; therefore, they are converted from ounces to pounds and listed on the worksheet in Column (b), as shown.

Recipe Name:	Porcupine Sli	ders					Serv	ings per Recipe:	50
Recipe Number:	Sandwiches I	F-10r		Serving Size:		1 slider			
Ingredients (a)	Quantity of Ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) ÷ (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total‡ ¾ cups (b) x (e)= OR (d) x (e)= (f)	Convert to cups (f) ÷ 4= (g)	Total Cups Vegetable per Serving (g) ÷ No. of Servings= (h)	Decimal Eq. to the Nearest Portion of a Cup (i)	Remaining (j)
Dark Green								-	
Fresh baby spinach, chopped	0.62500	10 oz	÷ 16 oz/lb = 0	.6250 lb		-			
			Dark G	reen Totals				-	
Other Fresh opions diged	0.07500		· · · · ·			1		•	
Fresh celery, diced	0.87500	6 oz ÷	16 oz/lb = 0.3 ÷ 16 oz/lb = 0	8750 lb .8750 lb	E				
			0	ther Totals)		-	-	

For canned items, find the appropriate can size in the FBG and/or convert the ingredient quantity to pounds or ounces.

EXAMPLES FOR CANNED INGREDIENTS:

a. If your stew recipe contains one (1) No. 10 can of diced tomatoes in juice, enter "1" in Column (b), as shown. Do not enter 102 oz (the weight of the No. 10 can). To continue, proceed to section 5, "Examples for canned ingredients" for instructions on how to enter the Servings per Purchase Unit in Column (e).

Recipe Name:	Canned Toma	ato Example					Ser	ings per Recipe:	50
Recipe Number:								Serving Size:	1 cup
Ingredients (a)	Quantity of Ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) ÷ (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total‡ ³ /4 cups (b) x (e)= OR (d) x (e)= (f)	Convert to cups (f) ÷ 4= (g)	Total Cups Vegetable per Serving (g) ÷ No. of Servings= (h)	Decimal Eq. to the Nearest Portion of a Cup (i)	Remaining (j)
Red/Orange								-	
Canned tomatoes, diced, in juice	1.00000	-				-			
			Red / Ore	inno Totalo			1		
			recu) ore	unge Totens				•	· · · · · ·

b. If your recipe requires a different amount (either more or less) of a canned, drained ingredient than is contained in a No. 10 can, you must determine how many cans you need. First, enter the ingredient amount in Column (b).

The Confetti Soup recipe contains 5 lb 10 oz of canned low-sodium black-eyed peas, drained, rinsed. Convert this amount to ounces: 90 oz. The FBG lists the Purchase Unit as "No. 10 can (108 oz)" and "No. 300 can (15 oz)" for this canned item; hence, the ingredient was converted from pounds to ounces to match the purchase unit and listed on the worksheet in Column (b), as shown.

Recipe Name:	Confetti Sour	D				•	Ser	ings per Recipe:	50
Recipe Number:	H-09r							Serving Size:	1 cup
Ingredients (a)	Quantity of Ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) ÷ (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total‡ ³ / ₄ cups (b) x (e)= OR (d) x (e)= (f)	Convert to cups (f) ÷ 4= (g)	Total Cups Vegetable per Serving (g) ÷ No. of Servings= (h)	Decimal Eq. to the Nearest Portion of a Cup (i)	Remaining (j)
Beans, Peas, and Lentils									
Canned low-sodium black- eyed peas, drained, rinsed	90.00000	(5 lb x 1	6 oz/lb) ÷ 10	oz = 90 oz)	-			
						-			
		Beans, Pea	is, and Lenti	ls Totals				•	

c. If your recipe contains 40 oz of canned pumpkin that is served heated, and the purchase unit is in pounds, then convert the ounces to pounds as listed on the worksheet in Column (b), shown. To continue, proceed to section 5, "Examples for canned ingredients" for instructions on how to enter the Servings per Purchase Unit in Column (e).

Recipe Name:	Canned Pum	pkin Example					Serv	ings per Recipe:	50
Recipe Number:								Serving Size:	½ cup
Ingredients (a)	Quantity of Ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) ÷ (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total‡ ³ /4 cups (b) x (e)= OR (d) x (e)= (f)	Convert to cups (f) ÷ 4= (g)	Total Cups Vegetable per Serving (g) ÷ No. of Servings= (h)	Decimal Eq. to the Nearest Portion of a Cup (i)	Remaining (j)
Red/Orange								-	
Canned pumpkin	2.50000	40 oz ÷ 16	5 oz/lb = 2.50	lb		-			
			Red/Ora	inge Totals				•	
									L

3. Record the preparation yield factor in "Preparation Yield," Column 6 in FBG, Column (c) for any vegetable ingredients that need to be converted to match the form of the item as listed under "Food as Purchased," Column 1 of the FBG.

EXAMPLE: The Harvest Delight recipe contains 3 lb each of fresh carrots, ¼ inch slices; fresh sweet potatoes, peeled, cubed 1 inch; and fresh, butternut squash, peeled, cubed ½ inch. The carrots, sweet potatoes, and butternut squash are purchased in their whole form and the recipe calls for the ingredients to be prepped (e.g. chopped, diced, peeled) prior to adding to the recipe; hence, use the preparation yield factor in Column 6 of the FBG for these three ingredients. The preparation yield factor in the FBG for these ingredients is as follows:

- Carrots, fresh, without tops is 1 lb AP = 0.83 lb (about $2^{2}/_{3}$ cups) trimmed, peeled, sliced carrots
- Sweet Potatoes, fresh, whole is 1 lb AP = 0.80 lb peeled, ready-to-cook sweet potato
- Squash, Winter, fresh Butternut whole is 1 lb AP = 0.84 lb ready-to-cook pared squash

Recipe Name:	Harvest Delig	ht					Serv	ings per Recipe:	50
Recipe Number:	Vegetables I-	21r						Serving Size:	½ cup
Ingredients (a)	Quantity of Ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) ÷ (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total‡ ³ /4 cups (b) x (e)= OR (d) x (e)= (f)	Convert to cups (f) ÷ 4= (g)	Total Cups Vegetable per Serving (g) ÷ No. of Servings= (h)	Decimal Eq. to the Nearest Portion of a Cup (i)	Remaining (j)
Red/Orange								-	
Fresh carrots, ¼" slices	3.00000	0.83000							
Fresh sweet potatoes, peeled, cubed 1"	3.00000	0.80000	Prep	aration yield	l is entered ir	Column (c)			
Fresh butternut squash, peeled, cubed ½"	3.00000	0.84000				-			
						-			
			Red/Ora	ange Totals				•	

EXAMPLE FOR CANNED INGREDIENTS: The Confetti Soup recipe contains 90 oz of canned low-sodium black-eyed peas, drained, rinsed. Use the preparation yield factor to determine the amount of drained black-eyed peas provided by a No. 10 can. The preparation yield factor in Column 6 in the FBG is as follows: 1 No. 10 can = about 65.0 oz (93% cups) heated, drained beans.

Recipe Name:	Confetti Sour	0					Se	rvings per Recipe:	50
Recipe Number:	H-09r							Serving Size:	1 cup
Ingredients (a)	Quantity of Ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) ÷ (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total‡ ½ cups (b) x (e)= OR (d) x (e)= (f)	Convert to cups (f) ÷ 4= (g)	Total Cups Vegetable per Serving (g) ÷ No. of Servings= (h)	Decimal Eq. to the Nearest Portion of a Cup (i)	Remaining (j)
Beans, Peas, and Lentils	•		•			•	•	•	•
Canned low-sodium black- eyed peas, drained, rinsed	90.00000	65.00000	Prep	aration yield	d is entered in	Column (c)			
							_		
						-			
		Reans Peas	and Lentils	Totals				-	
		Douils, I cas,		Tottals				•	

4. Calculate the quantity of each ingredient to purchase, if a preparation yield factor was used, and record the answer in "Calculated Quantity to Purchase," Column (d). This calculation is shown for the Harvest Delight.

Recipe Name:	Harvest Delig	;ht			Se	rvings per Recipe:	50		
Recipe Number:	Vegetables I-	21r						Serving Size:	½ cup
Ingredients (a)	Quantity of Ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) ÷ (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total‡ ⅓ cups (b) x (e)= OR (d) x (e)= (f)	Convert to cups (f) ÷ 4= (g)	Total Cups Vegetable per Serving (g) ÷ No. of Servings= (h)	Decimal Eq. to the Nearest Portion of a Cup (i)	Remaining (j)
Red/Orange								•	
Fresh carrots, ¼" slices	3.00000	0.83000	3.61446						
Fresh sweet potatoes, peeled, cubed 1"	3.00000	0.80000	3.75000		3.0000 ÷ 0.830	00 = 3.6144			
Fresh butternut squash, peeled, cubed ½"	3.00000	0.84000	3.57143	\square	3.0000 ÷ 0.800	00 = 3.7500			
					3.0000 ÷ 0.840	00 = 3.5714			
			Red/Ora	ange Totals	5			•	

EXAMPLE FOR CANNED INGREDIENT: For the Confetti Soup recipe, the calculation will provide the number of No. 10 cans of black-eyed peas to purchase.

Recipe Name:	Confetti Soup)		Se	rvings per Recipe:	50			
Recipe Number:	H-09r							Serving Size:	1 cup
Ingredients (a)	Quantity of Ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) ÷ (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total; ½ cups (b) x (e)= OR (d) x (e)= (f)	Convert to cups (f) ÷ 4= (g)	Total Cups Vegetable per Serving (g) ÷ No. of Servings= (h)	Decimal Eq. to the Nearest Portion of a Cup (i)	Remaining (j)
Beans, Peas, and Lentils				-	•				
Canned low-sodium black- eyed peas, drained, rinsed	90.00000	65.00000	1.38462	90 ne	.0000 ÷ 65.00 = ed to open 2 ca	1.3846 can ans of black	s. You will -eyed peas.		
						1			
		Beans, Pe	as, and Len	tils Totals				-	

5. Enter the Servings per Purchase Unit in Column (e) for each ingredient, using the "Servings per Purchase Unit, EP," Column 3 of the FBG.

EXAMPLE: The Harvest Delight recipe contains 11 oz of fresh spinach, coarsely chopped that will be added to the roasted mixture and served. "Servings per Purchase Unit, EP," Column 3 of the FBG lists three options for spinach, fresh, partly trimmed: 30.7, 20.4, and 7.60. By looking at the next Column in the FBG, "Serving Size per Meal Contribution," Column 4, 30.7 refers to 1/4 cup raw, chopped vegetable, 20.4 refers to 1/4 cup vegetable

with dressing, and 7.60 refers to ¼ cup cooked, drained vegetable. Since the spinach is heated by the roasted mixture when served, 7.60 is the closest option to the form served. 7.60 is entered in the "Servings per Purchase Unit Column 3 in the FBG," Column (e), as shown.

Recipe Name:	Harvest Delig	ght					Se	rvings per Recipe:	50
Recipe Number:	Vegetables I-	21r	_	_		-		Serving Size:	½ cup
Ingredients (a)	Quantity of Ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) ÷ (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total‡ ½ cups (b) x (e)= OR (d) x (e)= (f)	Convert to cups (f) ÷ 4= (g)	Total Cups Vegetable per Serving (g) ÷ No. of Servings= (h)	Decimal Eq. to the Nearest Portion of a Cup (i)	Remaining (j)
Dark Green						•		-	
Fresh spinach, coarsely chopped	0.68750	0.88000	0.78125	7.60000)				
			Dark G	reen Totals				•	

EXAMPLES FOR CANNED INGREDIENTS:

a. Referring back to the canned tomato ingredient that will be added to a stew in Section 2, the entire content of the can is used since the recipe contains diced tomatoes in juice; therefore, a preparation yield is not utilized and Columns (c) and (d) are left blank. Now determine the servings per purchase unit. In the FBG, "Servings per Purchase Unit, EP," Column 3 lists one option for a No. 10 can of Tomatoes, canned Diced: 49.2. By looking at the next Column in the FBG, "Serving Size per Meal Contribution," Column 4, 49.2 refers to servings of ¼ cup heated, vegetable and juice, so a No. 10 can provides 49.2 ¼ cup servings of heated, diced tomatoes in juice. Enter this amount in the "Servings per Purchase Unit," Column 3 in the FBG, Column (e), as shown.

Recipe Name:	Canned Toma	ato Example					Se	rvings per Recipe:	50
Recipe Number:								Serving Size:	1 cup
Ingredients (a)	Quantity of Ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) ÷ (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total‡ ¾ cups (b) x (e)= OR (d) x (e)= (f)	Convert to cups (f) ÷ 4= (g)	Total Cups Vegetable per Serving (g) ÷ No. of Servings= (h)	Decimal Eq. to the Nearest Portion of a Cup (i)	Remaining (j)
Red/Orange								-	
Canned tomatoes, diced, in juice	1.00000			49.20000)	- - -			
			Red/Ora	inge Totals				•	

b. For the Confetti Soup recipe, canned black-eyed peas, drained, rinsed are added to the soup mixture and cooked. There is only one option for a No. 10 can of beans, black-eyed (or peas), dry, canned in the FBG: 37.7. Enter 37.7 in the "Servings per Purchase Unit," Column 3 in the FBG, Column (e), as shown.

Recipe Name:	Confetti Sour)					Se	rvings per Recipe:	50
Recipe Number:	H-09r							1 cup	
Ingredients (a)	Quantity of Ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) ÷ (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total‡ ¾ cups (b) x (e)= OR (d) x (e)= (f)	Convert to cups (f) ÷ 4= (g)	Total Cups Vegetable per Serving (g) ÷ No. of Servings= (h)	Decimal Eq. to the Nearest Portion of a Cup (i)	Remaining (j)
Beans, Peas and Lentils				•					
Canned low-sodium black- eyed peas, drained, rinsed	90.00000	65.00000	1.38462	37.70000					
		Beans, Pe	as and Lenti	ls Totals				•	

c. Referring back to the canned pumpkin example in Section 2, after converting the ounces to pounds the next step is to find the "Servings per Purchase Unit, EP," Column 3 of the FBG for a pound of pumpkin, canned, which is 7.77. By looking at the next column in the FBG, "Serving Size per Meal Contribution," Column 4, 7.77 refers to ¼ cup heated vegetable. So, a pound provides 7.77 ¼ cup servings of heated pumpkin. Enter 7.77 in the "Servings per Purchase Unit," Column 3 in the FBG, Column (e), as shown:

Recipe Name:	Canned Pum	pkin Example					Se	rvings per Recipe:	50
Recipe Number:								Serving Size:	½ cup
Ingredients (a)	Quantity of Ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) ÷ (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total‡ ⅔ cups (b) x (e)= OR (d) x (e)= (f)	Convert to cups (f) ÷ 4= (g)	Total Cups Vegetable per Serving (g) ÷ No. of Servings= (h)	Decimal Eq. to the Nearest Portion of a Cup (i)	Remaining (j)
Red/Orange								•	
Canned pumpkin	2.50000			7.77000)				
						1			
						ļ			
						+			
			Ded/Ore	Tetels			1		
	1		Red/Ora	inge rotais				•	
<u> </u>									

6. Enter the total number of ¼ cups for each ingredient by multiplying the numbers in Columns (b) and (e), if a preparation yield is not utilized, or multiplying the numbers in Columns (d) and (e), if a preparation yield is used.

EXAMPLE: For the fresh spinach in the Harvest Delight recipe, a preparation yield was used, so the number in Column (d) is multiplied by the number in Column (e). This calculation is shown:

Recipe Name:	Harvest Delig	;ht					Sei	rvings per Recipe:	50
Recipe Number:	Vegetables I-	21r					Serving Size: ½ cup		
Ingredients (a)	Quantity of Ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) ÷ (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total‡ ¾ cups (b) x (e)= OR (d) x (e)= (f)	Convert to cups (f) ÷ 4= (g)	Total Cups Vegetable per Serving (g) ÷ No. of Servings= (h)	Decimal Eq. to the Nearest Portion of a Cup (i)	Remaining (j)
Dark Green								-	
Fresh spinach, coarsely chopped	0.68750	0.88000	0.78125	7.60000	5.93750	0.781	12 x 7.6000 = 5	5.9375	
			Dark G	reen Totals	5,93750				
					\sim				

The total number of $\frac{1}{4}$ cups for each vegetable subgroup for the Harvest Delight recipe is then totaled, as circled in red above. For the Dark Green subgroup, the total number of $\frac{1}{4}$ cups is 5.9375.

EXAMPLE: For the fresh baby spinach in the Porcupine Sliders recipe, the preparation yield is 1 lb AP = 1 lb ready-to-cook or -serve raw spinach, so the preparation yield was not entered and the number in Column (b) is multiplied by the number in Column (e).

Recipe Name:	Porcupine Sli	ders					Se	rvings per Recipe:	50
Recipe Number:	Sandwiches l	F-10r		_				Serving Size:	1 slider
Ingredients (a)	Quantity of Ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) ÷ (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total‡ % cups (b) x (e)= OR (d) x (e)= (f)	Convert to cups (f) ÷ 4= (g)	Total Cups Vegetable per Serving (g) + No. of Servings= (h)	Decimal Eq. to the Nearest Portion of a Cup (i)	Remaining (j)
Dark Green								•	
Fresh baby spinach, chopped	0.62500			12.60000	7.87500	0.625	i0 x 12.6000 =	- 7.8750	
			Dark G	reen Totals	7.87500			•	
					\sim				

The total number of ¼ cups for each vegetable subgroup in the Porcupine Sliders recipe is then totaled, which is 7.8750 for the Dark Green subgroup, as circled above.

EXAMPLES FOR CANNED INGREDIENTS:

a. Continuing with the canned tomato ingredient, the number in Column (b) is multiplied by the number in Column (e).

Recipe Name:	Canned Tom	ato Example					Se	rvings per Recipe:	50
Recipe Number:								Serving Size:	1 cup
Ingredients (a)	Quantity of Ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) ÷ (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total‡ ⅓ cups (b) x (e)= OR (d) x (e)= (f)	Convert to cups (f) ÷ 4= (g)	Total Cups Vegetable per Serving (g) + No. of Servings= (h)	Decimal Eq. to the Nearest Portion of a Cup (i)	Remaining (j)
Red/Orange								-	
Canned tomatoes, diced, in juice	1.00000			49.20000	49.20000	1.000	00 x 49.2000	= 49.2000	
					\frown				-
			Red/Ora	ange Totals	49.20000)		-	
					\sim				

The number of $\frac{1}{4}$ cups is then totaled, which is 49.2000 for the Red/Orange subgroup, as circled above.

b. For the Black-eyed peas in the Confetti Soup recipe, a preparation yield was used, so the number in Column (d) is multiplied by the number in Column (e).

						Se	rvings per Recipe:	50
-09 r						Serving Size:		1 cup
Quantity of ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) ÷ (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total‡ % cups (b) x (e)= OR (d) x (e)= (f)	Convert to cups (f) ÷ 4= (g)	Total Cups Vegetable per Serving (g) ÷ No. of Servings= (h)	Decimal Eq. to the Nearest Portion of a Cup (i)	Remaining (j)
90.00000	65.00000	1.38462	37.70000	52.20000	1.384	i6 x 37.7000 :	= 52.2000)
	D D	1.4	an (1	E0.00000				-
	Beans, Pea	s, and Lentil	s lotáls	52.20000	/		•	
20	uantity of gredient (b) 90.00000	Preparation Yield Column 6 (b) 90.00000 65.00000 90.00000 Beans, Pea	Preparation Vield (b) Preparation Yield (column 6 (c) (c) Purchase (b) + (c)= (d) 90.00000 65.00000 1.38462 Beans, Peas, and Lentil	Preparation Yield (b) Calculated Quantity to Column 6 in FBG (c) Servings per Purchase (b) + (c)= (d) 90.00000 65.00000 1.38462 37.70000 90.00000 65.00000 1.38462 37.70000 Beans, Peas, and Lentils Totals 100000 100000	Preparation Yield (b) Calculated Quantity to (c) Servings Purchase Unit (b) + (e)= (d) Total‡ Y ₄ cups (b) x (e)= (c) (d) 90.00000 65.00000 1.38462 37.70000 52.20000 90.00000 65.00000 1.38462 37.70000 52.20000 90.00000 65.00000 1.38462 37.70000 52.20000 90.00000 65.00000 1.38462 37.70000 52.20000	Preparation Vield gredient (b) Calculated Quantity to (c) Servings Por Purchase (b) + (e)= (d) Totali Purchase Unit Sin FBG (e) Convert (b) x (e)= (f) Convert to cups (f) + (e)= (f) 90.00000 65.00000 1.38462 37.70000 52.20000 90.00000 65.00000 1.38462 37.70000 52.20000 90.00000 65.00000 1.38462 37.70000 52.20000 90.00000 65.00000 1.38462 52.20000	Preparation Vield (b) Calculated Quantity to (c) Servings Purchase (b) Total; Ys. cups (b) Total; Ys. cups (b) Total; Ys. cups (b) Total; Purchase (b) Total; Ys. cups (b) Total; Per 000000 Column 6 in FBG (c) Purchase (b) + (e)= (d) Column 6 (c) Convert (f) Convert (f) Convert (g) Servings (g) 90.00000 65.00000 1.38462 37.70000 52.20000 1.3846 x 37.7000 Beans, Peas, and Lentils Totals 52.20000 52.20000 1.3846 x 37.7000	Preparation Stellar Calculated Quantity to (b) + (c)= (c) Servings per Unit (b) + (c)= (d) Total y cups Unchase Unit (b) x (c)= (f) Total Cups (c) Decimal Eq. to to usper (b) x (c)= (f) 90.00000 65.00000 1.38462 37.70000 52.20000 1.3846 x 37.7000 = 52.2000 90.00000 65.00000 1.38462 37.70000 52.20000 1.3846 x 37.7000 = 52.2000

The total ¹/₄ cups for each vegetable subgroup for the Confetti Soup recipe is then totaled, which is 52.2000 for the Beans, Peas, and Lentils subgroup, as circled above.

c. Using the canned pumpkin example, which does not use a preparation yield, the number in Column (b) is multiplied by the number in Column (e).

Recipe Name:	Canned Pum	pkin Example					Se	rvings per Recipe:	50
Recipe Number:								Serving Size:	½ cup
Ingredients (a)	Quantity of Ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) ÷ (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total‡ ⅔ cups (b) x (e)= OR (d) x (e)= (f)	Convert to cups (f) ÷ 4= (g)	Total Cups Vegetable per Serving (g) ÷ No. of Servings= (h)	Decimal Eq. to the Nearest Portion of a Cup (i)	Remaining (j)
Red/Orange								•	
Canned pumpkin	2.50000			7.77000	19.42500	2.50	00 x 7.7700 =	19.4250	
							1		-
			Red/Ora	ange Totals	19.42500	2		•	

The total ¼ cups for the canned pumpkin example are then totaled, which is 19.4250 for the Red/Orange subgroup, as circled above.

 Calculate the number of cups for each vegetable subgroup and record this number in "Convert to cups," Column (g). This calculation is done by dividing the number of ¼ cups in Column (f) by four to determine the number of whole cups, as shown.

Recipe Name:	Porcupine Sli	ders					Se	rvings per Recipe:	50
Recipe Number:	Sandwiches I	7-10r						Serving Size:	1 slider
Ingredients (a)	Quantity of Ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) ÷ (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total‡ ¾ cups (b) x (e)= OR (d) x (e)= (f)	Convert to cups (f) ÷ 4= (g)	Total Cups Vegetable per Serving (g) + No. of Servings= (h)	Decimal Eq. to the Nearest Portion of a Cup (i)	Remaining (j)
Dark Green									
Fresh baby spinach, chopped	0.62500			12.60000	7.87500				
							7.875	0 ÷ 4 = 1.9687	
			Dark G	reen Totals	7 87500	1.06875	4		
			Dark G	leen totais	7.87300	1.90873			

8. Calculate the total cups per serving for each vegetable subgroup and record this number in "Total Cups Vegetable per Serving," Column (h). This calculation is done by dividing the number of total cups in Column (g) by the number of servings per recipe, as shown.

Recipe Name:	Porcupine Sli	ders					S	ervings per Recipe:	50
Recipe Number:	Sandwiches l	F-10r						Serving Size:	1 slider
Ingredients (a)	Quantity of Ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) ÷ (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total‡ ½ cups (b) x (e)= OR (d) x (e)= (f)	Convert to cups (f) ÷ 4= (g)	Total Cups Vegetable per Serving (g) ÷ No. o Servings= (h)	Decimal Eq. to the Nearest Portion of a Cup (i)	Remaining (j)
Dark Green									
Fresh baby spinach, chopped	0.62500			12.60000	7.87500				
								1.96875 ÷ 50 = 0.03	393
			Dark G	reen Totals	7.87500	1.96875	0.0393	3	

9. Use Table 7 on page I-25 to determine the decimal equivalent to the nearest portion of a cup for the amount in Column (h) and record the decimal equivalent in Column (i) or use the drop-down menu in Column (i), if using the RAW spreadsheet.

EXAMPLE 1: The spinach in the Porcupine Sliders recipe provides 0.0393 total cups of vegetable from the Dark Green subgroup per serving as listed in "Total Cups of Vegetable per Serving," Column (h). Use Table 7 on page I-25 to determine the decimal equivalent to the nearest portion of a cup for 0.0393 and record the decimal equivalent in Column (i) "Decimal Eq. to the Nearest Portion of a Cup" or if using the RAW spreadsheet, use Column (i) to convert the decimal equivalent of 0.0393 to the nearest portion of a cup, and choose your answer from the drop-down menu as shown. The lowest decimal equivalent is 0.125, which is greater than 0.0393.

Recipe Name:	Porcupine Sli	iders					Se	rvings per Recipe:	50
Recipe Number:	Sandwiches l	F-10r						Serving Size:	1 slider
Ingredients (a)	Quantity of Ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) ÷ (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total‡ %4 cups (b) x (e)= OR (d) x (e)= (f)	Convert to cups (f) ÷ 4= (g)	Total Cups Vegetable per Serving (g) ÷ No. of Servings= (h)	Decimal Eq. to the Nearest Portion of a Cup (i)	Remaining (j)
Dark Green	•							-	
Fresh baby spinach, chopped	0.62500			12.60000	7.87500	0.03 mini of 0. vege selec men	93 is less the imum credita 125 to provi table; therefo cted from the u.	an the able amount de ½ cup orce, 0.000 is e drop-down	
	1		Dark G	reen Totals	7.87500	1.96875	0.03938	0.000	

In this example, the lowest decimal equivalent listed in Table 7 is 0.125 which is greater than 0.0393, so the amount of fresh baby spinach in the recipe is not enough to provide the minimum ½ cup vegetable credit for the Dark Green subgroup. Record none in Column (i) "Decimal Eq. to the Nearest Portion of a Cup" or select "0.000" from the drop-down menu if using the RAW spreadsheet, as shown above. EXAMPLE 2: One portion of the Harvest Delight recipe provides 0.4520 cups of vegetable from the Red/Orange subgroup. This amount is listed in "Total Cups of Vegetables per Serving," Column (h). Using Table 7 on page I-25, 0.4520 falls within the decimal equivalent range of 0.375 and 0.499, so record the lower number of the range, 0.375, in Column (i) as the nearest portion of a cup, or if using the RAW spreadsheet, use the drop-down menu in Column (i) to convert the decimal equivalent of 0.4520 to the nearest portion of a cup as shown.

Recipe Name:	Harvest Deli	ght					Servings	per Recipe:	50
Recipe Number:	Vegetables I	-21r					Se	erving Size:	½ cup
Ingredients (a)	Quantity of Ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) ÷ (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total‡ ½ cups (b) x (e)= OR (d) x (e)= (f)	Convert to cups (f) ÷ 4= (g)	Total Cups Vegetable per Serving (g) ÷ No. of Servings= (h)	Decimal Eq. to the Nearest Portion of a Cup (i)	Remaining (j)
Red/Orange								•	
Fresh carrots, ¼" sllices	3.00000	0.83000	3.61446	8.16000	29.49398				
Fresh sweet potatoes, peeled, cubed 1"	3.00000	0.80000	3.75000	9.10000	34.12500	0.4	520 is betwee	en 0.375	
Fresh butternut squash ½"	3.00000	0.84000	3.57143	7.50000	26.78571	and can and pro	to 0.499; there rots, sweet p d butternut so ovide % cup r getable.	otatoes, quash ed/orange	
									ł
			Red/Ors	l ange Totals	90 40469	22 60117	0.45202	0 275 0 400 /2	/8 cup' 🖛
Starchy				ange Potais	50.70409	22.00117	0.10202	0.375-0.499 (3	/o cup, 👻

In this example, using Table 7, the amount of fresh carrots, fresh sweet potatoes, and fresh butternut squash in the recipe provides 3/8 cup vegetable credit for the Red/Orange subgroup. Record this amount in Column (j), or if using the RAW spreadsheet, this amount is listed with the nearest portion of a cup from the drop-down menu in Column (i), as shown above.

10. Determine if there is any remaining amount of vegetables and record this amount in "Remaining," Column (k) or Column (j) if using the RAW spreadsheet. You will calculate this remaining amount by subtracting the lower value in the decimal equivalent range in Column (i) from the "Total Cups Vegetable per Serving," Column (h). Remaining amounts from the Beans, Peas, and Lentils; Dark Green; Red/Orange; and Other vegetable subgroups are added together to provide an extra Other vegetables credit, if the total is enough to provide at least the minimum ½ cup credit. If there is a remaining amount for the Starchy subgroup, it may contribute only to the Additional vegetable subgroup.

Please note that for the CACFP and NSLP afterschool snacks, add the total amounts from all vegetable subgroups to determine the total amount of vegetables provided in a recipe. For recipes served in the SFSP that contain both vegetables and fruits, add the total amount of vegetables to the total amount of fruits to determine the total fruit and vegetable credit for that recipe.

EXAMPLE: For the Harvest Delight recipe, there are remaining amounts for the Red/Orange and Other vegetable subgroups. The remaining amounts are added together to determine if they can contribute to the Other vegetable subgroup. In this example, the remaining amounts provide 1/8 cup Other vegetables credit, as shown.

Recipe Name:	Harvest Del	ight					Servings	ner Recine:	50
Recipe Number:	Vegetables I	-21r					s	erving Size:	½ cup
Ingredients (a)	Quantity of Ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) ÷ (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total‡ ^{3/4} cups (b) x (e)= OR (d) x (e)= (f)	Convert to cups (f) ÷ 4= (g)	Total Cups Vegetable per Serving (g) ÷ No. of Servings= (h)	Decimal Eq. to the Nearest Portion of a Cup (i)	Remaining (j)
Red/Orange									
Fresh carrots, ¼" slices	3.00000	0.83000	3.61446	8.16000	29.49398				
potatoes, pealed, cubed 1"	3.00000	0.80000	3.75000	9.10000	34.12500				
Fresh butternut squash, peeled, cubed ½"	3.00000	0.84000	3.57143	7.50000	26.78571		0.4	520 - 0.375 =	0.0770
			Red/O	range Totals	90.40469	22.60117	0.45202 0.3	75-0.499 (3/8 cup] •	0.07702
Other					-				
Fresh red onions, diced	1.00000			12.60000	12.60000				
								0.0630 - 0 = 0.	0630
	I			Othe r Totals	12.60000	3,15000	0.06300	-	0.06300
0.0770	+ 0.0630 = 0.	1400		Beans/ Peas	Dark Green	Red/ Orange	Starchy	Other	Additional
Expected Meal	ttern Contr	ibution (Veget	able - Cups):			¾ cup		0.000	
(1) 0.14002	Eq Cup (0.125-0.249 (1/	Eq Cup Volume (m) Remaining vegetables may be added to your "Other" or "Additional" subgroup. For more information on vegetable subgroup categories please see the Meal Pattern and Dietary 25-0.249 (1/8 cup) ▼ Specifications Chart (www.fns.usda.gov/cnd/governance/legislation/dietaryspecs.pdf). You							For more Dietary becs.pdf). You

11. Total the Equivalent Cup Volume amounts in Column (j) including any remaining amounts and record these totals in the Expected Meal Pattern Contribution (Vegetable–Cups) field and on Figure 1g, or these totals will self-populate if using the RAW spreadsheet. Doing so will combine the meal pattern contribution for the vegetables component with the other meal components onto one worksheet for the recipe.

Fruits Contribution Worksheet (Figure 1b)

Follow these steps to calculate the fruits contribution per serving:

1. Record the name of the ingredient in the "Ingredients," Column (a).

EXAMPLE: The Harvest Delight recipe contains fresh green apples, peeled, cubed ½ inch and dried cranberries, finely chopped. List these ingredients on the worksheet in Column (a), as shown.

Recipe Name:	Harvest Del	ight			Servings per	Recipe:	50
Recipe Number:	Vegetables I	-21r			Serving Size	:	¹ ∕₂ cup
Ingredients (a)	Quantity of Ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) ÷ (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total‡ ¾ cups (b) x (e)= OR (d) x (e)= (f)	Convert to cups (f) ÷ 4= (g)	Total Cups Fruit per Serving (g) ÷ No. of Servings= (h)
Fresh green apples, cubed ½"							
Dried cranberries, finely chopped							

2. Enter the ingredient quantity in the "Quantity of Ingredient," Column (b) using the same weight or volume unit found in the "Purchase Unit," Column 2 in the FBG. If the recipe lists the ingredient in a different unit, you will convert the quantity to that unit before calculating the meal pattern contribution.

EXAMPLE: The Harvest Delight recipe contains 4 lb fresh green apples, peeled, cubed, 1/2 inch and 2 oz of dried cranberries, finely chopped. The FBG lists the Purchase Unit as "Pound" for apples, fresh; therefore, no conversion is needed. However, in the FBG, the Purchase Unit for cranberries, dehydrated is also "Pound," so the 2 oz are converted to pounds. Both ingredients are then listed on the worksheet in Column (b), as shown.

Recipe Name:	Harvest Del	ight			Servings per	r Recipe:	50
Recipe Number:	Vegetables I				Serving Size	ə:	¹ ∕₂ cup
Ingredients (a)	Quantity of Ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) ÷ (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total‡ ½ cups (b) x (e)= OR (d) x (e)= (f)	Convert to cups (f) ÷ 4= (g)	Total Cups Fruit per Serving (g) ÷ No. of Servings= (h)
Fresh green apples, cubed ½"	4.00000						
Dried cranberries, finely chopped	0.12500	2 oz + 16	oz/lb = 0.1250	lb			

EXAMPLES FOR CANNED INGREDIENTS:

a. If your recipe contains one (1) No. 10 can of red tart cherries, enter "1" in Column (b) not 102 oz (the weight of a No. 10 can of cherries), as shown. Then proceed to section 5, "Examples for canned ingredients" for further instructions.

Recipe Name:	Canned Cher	ries Example			Servings pe	50	
Recipe Number:					Serving Size	1 cup	
Ingredient (a)	Quantity of Ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) ÷ (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total‡ ⅔ cups (b) x (e)= OR (d) x (e)= (f)	Convert to cups (f) ÷ 4= (g)	Total Cups Fruit per Serving (g) ÷ No. of Servings= (h)
Canned cherries, red tart, pitted	1.00000						

b. If your recipe requires a different amount (either more or less) of a canned, drained ingredient than is provided by a No. 10 can (or other size can), you can determine how many cans you need by first entering the quantity of the ingredient in Column (b).

For example, a recipe contains 6 lb of canned peaches, cling, sliced, drained, packed in light syrup, which converts to equal 96 oz. The FBG lists the Purchase Unit as "No. 10 can (105 oz)" for this canned item; hence, this ingredient was converted from pounds to ounces and listed on the worksheet in Column (b), as shown.

Recipe Name:	Canned Peac	hes Example			Serving	s per Recipe:	50
Recipe Number:						Serving Size:	1 cup
Ingredient (a)	Quantity of Ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) ÷ (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total‡ ¾ cups (b) x (e)= or (d) x (e) = (f)	Convert to cups (f) ÷ 4 = (g)	Total cups Fruit Per Serving (g) ÷ No. of Servings = (h)
Canned peaches, cling, sliced, drained, packed in light syrup	96.00000						

3. Record the preparation yield factor in "Preparation Yield," Column 6 in FBG, Column (c) for any fruit ingredients that need to be converted to match the form of the item as listed under "Food as Purchased," Column 1 of the FBG.

EXAMPLE: The Harvest Delight recipe contains 4 lb of fresh green apples, peeled, cubed ½ inch. The apples are purchased in their whole form. Use the preparation yield factor in Column 6 of the FBG for the whole fresh apples in the FBG to convert the green apples to their "As Purchased" form. The only preparation yield factor in the FBG for dehydrated cranberries is in their whole form. The recipe contains chopped cranberries, but since this is not a choice in the FBG, use the preparation yield factor for whole, dehydrated cranberries. The preparation yield factor in Column 6, FBG for these ingredients is as follows:

Apples, fresh 125–138 count Whole 1 lb AP = 0.78 lb (about 2³/₄ cups) ready-to-cook or -serve raw, cored, peeled apple.

 Cranberries, dehydrated Sweetened Whole 1 lb AP = 1 lb (about 3³/₈ cups) ready-to-cook or -serve berries.

Recipe Name:	Harvest Del	ight			Servings per	r Recipe:	50
Recipe Number:	Vegetables I	-21r			Serving Size	½ cup	
Ingredients (a)	Quantity of Ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) ÷ (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total‡ ⅔ cups (b) x (e)= OR (d) x (e)= (f)	Convert to cups (f) ÷ 4= (g)	Total Cups Fruit per Serving (g) ÷ No. of Servings= (h)
Fresh green apples, peeled, cubed ½"	4.00000	0.78000	Prepara	ation yield en	tered in Colum	in (c)	
Dried cranberries, finely chopped	0.12500						

EXAMPLE FOR CANNED INGREDIENT: For the canned peaches example, you must use the preparation yield factor from the FBG Column 6 to calculate the quantity of No. 10 cans needed. The preparation yield factor in the FBG is as follows: 1 No. 10 can = about 72.0 oz (9 cups) drained peaches.

Recipe Name:	Canned Peac	hes Example			Serving	s per Recipe:	50
Recipe Number:						Serving Size:	1 cup
Ingredient (a)	Quantity of Ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) ÷ (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total‡ ¾ cups (b) x (e)= or (d) x (e) = (f)	Convert to cups (f) ÷ 4 = (g)	Total cups Fruit Per Serving (g) + No. of Servings = (h)
Canned peaches, cling, sliced, drained, packed in light syrup	96.00000	72.00000	Prepa	ration yield enter	ed in Column (c)	

4. Calculate the quantity of each ingredient to purchase, if a preparation yield factor was used, and record the answer in "Calculated Quantity to Purchase," Column (d). The following calculation is for the fruit in the Harvest Delight recipe.

Recipe Name:	Harvest Deli	ight			Servings per	r Recipe:	50
Recipe Number:	Vegetables I	-21r			Serving Size	:	¹ ∕₂ cup
Ingredients (a)	Quantity of Ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) ÷ (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total‡ ½ cups (b) x (e)= OR (d) x (e)= (f)	Convert to cups (f) ÷ 4= (g)	Total Cups Fruit per Serving (g) + No. of Servings= (h)
Fresh green apples, peeled, cubed ½"	4.00000	0.78000	5.12821	4.000	0 ÷ 0.7800 = 5.1	1282	
Dried cranberries, finely chopped	0.12500						

EXAMPLE FOR CANNED INGREDIENT: Continuing with the canned peaches example, the following calculation demonstrates how to determine the number of No. 10 cans of peaches to purchase.

Recipe Name:	Canned Peac	ches Example			Servings	s per Recipe:	50	
Recipe Number:						Serving Size:	1 cup	
Ingredient (a)	Quantity of Ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) ÷ (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total‡ ⅓ cups (b) x (e)= or (d) x (e) = (f)	Convert to cups (f) + 4 = (g)	Total cup Fruit Per Servin (g) ÷ No. c Servings (h)	ps ng of =
Canned peaches, cling, sliced, drained, packed in tight syrup	96.00000	72.00000	1.33333	96.000 You w	00 ÷ 72.0000 = vill need to op	= 1.3333 cans en 2 cans of po	eaches.	

5. Record the "Servings per Purchase Unit" in Column (e) for each ingredient, as listed in the "Servings per Purchase Unit, EP," Column 3 of the FBG.

EXAMPLE: To determine the servings per purchase unit, choose the option that most closely matches the form in which the ingredient is served. In the Harvest Delight recipe, the fresh green apples are roasted, and the dried cranberries are mixed in to the heated mixture just prior to serving.

For the apples, the "Servings per Purchase Unit, EP," Column 3 of the FBG lists five numerical options for apples, fresh, 125–138 count, whole. Look at the next column in the FBG, "Serving Size per Meal Contribution," Column 4 and there is an option for "1⁄4 cup cored, peeled, cooked, unsweetened fruit," which is the closest option to the form the apples in this recipe will be served. Enter 6.80, which is the number in Column 3 corresponding to this option, in the "Servings per Purchase Unit," Column 3 in the FBG, Column (e).

For the cranberries, the "Servings per Purchase Unit, EP," Column 3 of the FBG lists three numerical options for cranberries, dehydrated sweetened whole. By looking at the next column in the FBG, "Serving Size per Meal Contribution," Column 4, all three options are the same (there is not a raw or cooked option). To determine the servings per purchase unit, choose the option that best corresponds to the "Purchase Unit," Column 2 of your ingredient. In this example, 13.8 is used as the servings per purchase unit since the purchase unit was in pounds. Enter 13.8 in the "Servings per Purchase Unit," Column 3 in the FBG, Column (e) as shown.

Recipe Name:	Harvest Deli	ight			Servings per	r Recipe:	50
Recipe Number:	Vegetables I	-21r			Serving Size	:	½ cup
Ingredients (a)	Quantity of Ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) ÷ (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total‡ ½ cups (b) x (e)= OR (d) x (e)= (f)	Convert to cups (f) ÷ 4= (g)	Total Cups Fruit per Serving (g) ÷ No. of Servings= (h)
Fresh green apples, peeled, cubed ½"	4.00000	0.78000	5.12821	6.80000			
Dried cranberries, finely chopped	0.12500			13.80000			

EXAMPLES FOR CANNED INGREDIENTS:

a. Referring back to the canned cherries example in Section 2, the entire contents of the can are used. Therefore, a preparation yield is not needed, and Columns (c) and (d) are left blank. Next, determine the servings per purchase unit. In the FBG, "Servings per Purchase Unit, EP," Column 3 lists two options for a No. 10 can of Cherries, Red Tart, canned, Pitted: 46.8 and 36.2. These numbers are explained in the next column in the FBG, "Serving Size per Meal Contribution," Column 4. 46.8 refers to ¼ cups of fruit and juice and 36.2 refers to ¼ cups of drained fruit. Because both the cherries and juice are used in the recipe, the 46.8 ¼ cup servings of fruit and juice best match the form in which the cherries are served. Enter 46.8 in the "Servings per Purchase Unit," Column 3 in the FBG, Column (e), as shown.

Recipe Name:	Canned Cher	ries Example			Servings pe	r Recipe:	50
Recipe Number:					Serving Size	1 cup	
Ingredient (a)	Quantity of Ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) ÷ (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total‡ ⅔ cups (b) x (e)= OR (d) x (e)= (f)	Convert to cups (f) ÷ 4= (g)	Total Cups Fruit per Serving (g) + No. of Servings= (h)
Canned cherries, red tart, pitted	1.00000			46.80000	5		•
				\sim		Ī	

b. For the canned peaches example, the peaches are drained. "Servings per Purchase Unit, EP," Column 3 of the FBG lists two options for Peaches, canned, Cling, Sliced, Packed in light syrup: 50.0 and 36.1. The next column in the FBG, "Serving Size per Meal Contribution," Column 4, explains these numbers; 50.0 refers to ¼ cups of fruit and juice and 36.1 refers to ¼ cups of drained fruit. After the No. 10 can of peaches in your recipe is drained it will provide 36.1 ¼ cups of drained fruit. Enter 36.1 in the "Servings per Purchase Unit," Column 3 in the FBG, Column (e), as shown.

Recipe Name:	Canned Peac	ches Example			Serving	s per Recipe:	50
Recipe Number:						Serving Size:	1 cup
Ingredient (a)	Quantity of Ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) ÷ (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total‡ ¾ cups (b) x (e)= or (d) x (e) = (f)	Convert to cups (f) ÷ 4 = (g)	Total cups Fruit Per Serving (g) ÷ No. of Servings = (h)
Canned peaches, cling, sliced, drained, packed in light syrup	96.00000	72.00000	1.33333	36.10000			

6. Enter the total ¼ cups for each ingredient by multiplying the numbers in Columns (b) and (e) if a preparation yield is not utilized, or multiplying the numbers in Columns (d) and (e) if a preparation yield is used.

EXAMPLE: For the fresh green apples, a preparation yield is used, so the number in Column (d) is multiplied by the number in Column (e). However, for the dried cranberries, a preparation yield was not used, so the number in Column (b) is multiplied by the number in Column (e), as shown:

Recipe Name:	Harvest Deli	ght			Servings per	Recipe:	50
Recipe Number:	Vegetables I	-21r			Serving Size	:	¹ ∕₂ cup
Ingredients (a)	Quantity of Ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) ÷ (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total‡ ⅔ cups (b) x (e)= OR (d) x (e)= (f)	Convert to cups (f) ÷ 4= (g)	Total Cups Fruit per Serving (g) ÷ No. of Servings= (h)
Fresh green apples, peeled, cubed ½"	4.00000	0.78000	5.12821	6.80000	34.87179	_	
Dried cranberries, finely chopped	0.12500			13.80000	1.72500	5.12821 x 6	5.8000 =
						34.87179 0.1250 x 13 1.72500	.8000 =
				Totals	36.59679)	
	E	xpected Meal	Pattern Con	tribution (F	ruit—Cups)		-

The total number of $\frac{1}{4}$ cups for each item is then totaled, as circled in red. The total number of $\frac{1}{4}$ cups of fruit in this recipe is 36.5967.

EXAMPLES FOR CANNED INGREDIENTS:

a. Continuing with the canned cherries example, the number in Column (b) is multiplied by the number in Column (e).

Recipe Name:	Canned Cherries Example Servings					r Recipe:	50
Recipe Number:					Serving Size	:	1 cup
Ingredient (a)	Quantity of Ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) ÷ (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total‡ ⅔ cups (b) x (e)= OR (d) x (e)= (f)	Convert to cups (f) ÷ 4= (g)	Total Cups Fruit per Serving (g) ÷ No. of Servings= (h)
Canned cherries, red tart,	1 00000			46,80000	46,80000		
pitted	1.00000			46.80000	46.80000		
						1.0000 x = 46.800	46.8000 0
			ļ	Totals	46.80000)	
	Exp		•				

The total number of ¼ cups for the canned cherries example is then totaled, which is 46.8000, as circled.

b. For the canned peaches example, a preparation yield was used, so the number in Column (d) is multiplied by the number in Column (e) as shown.

Recipe Name:	Canned Peac	ches Example			Servings	per Recipe:	50
Recipe Number:		•				Serving Size:	1 cup
Ingredient (a)	Quantity of Ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) ÷ (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total‡ ½ cups (b) x (e)= or (d) x (e) = (f)	Convert to cups (f) + 4 = (g)	Total cups Fruit Per Serving (g) ÷ No. of Servings = (h)
Canned peaches, cling, sliced, drained, packed in tight syrup	96.00000	72.00000	1.33333	36.10000	48.13333	1	
						1.3333 x 36 48.1333	.1000 =
			1	Totals	48.13333		
]	Expected Meal	Pattern Con	tribution (F	ruit—Cups)		

The total $\frac{1}{4}$ cups for the canned peaches example is then totaled, which is 48.1333, as circled above.

 Calculate the number of cups for the fruits and record this number in "Convert to cups," Column (g). This calculation is done by dividing the number of ¼ cups in Column (f) by four (4) to determine the number of whole cups, as shown:

Recipe Name:	Harvest Deli	ght			Servings per	r Recipe:	50
Recipe Number:	Vegetables I	-21r			Serving Size	:	¹ ∕₂ cup
Ingredients (a)	Quantity of Ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) ÷ (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total‡ ⅔ cups (b) x (e)= OR (d) x (e)= (f)	Convert to cups (f) ÷ 4= (g)	Total Cups Fruit per Serving (g) ÷ No. of Servings= (h)
Fresh green apples, peeled, cubed ½"	4.00000	0.78000	5.12821	6.80000	34.87179		
Dried cranberries, finely chopped	0.12500			13.80000	1.72500		
						36.5967 ÷	4 = 9.1492
				Totals	36.59679	9.14920	
		Expected Mea	al Pattern Co	ntribution (I	Fruit—Cups)		-

8. Calculate the total cups per serving for the fruits and record this number in "Total Cups Fruit per Serving," Column (h). This calculation is done by dividing the number of total cups in Column (g) by the number of servings per recipe, as shown

Recipe Name:	Harvest Deli	ight			Servings per	r Recipe:	50	
Recipe Number:	Vegetables I	-21r			Serving Size	:	⅔ cup	
Ingredients (a)	Quantity of Ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) ÷ (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total‡ ⅔ cups (b) x (e)= OR (d) x (e)= (f)	Convert to cups (f) ÷ 4= (g)	Tot Cuy Fru pe Serv (g) ÷ N Servi (h	tal ps uit r ring Io. of ngs=
Fresh green apples, peeled, cubed ½"	4.00000	0.78000	5.12821	6.80000	34.87179			
Dried cranberries, finely chopped	0.12500			13.80000	1.72500			
				Totals	36.59679	9.1492 ÷ 9.14920	0.	829 18298
	1	Expected Mea	l Pattern Cor	tribution (F	ruit—Cups)			-

9. Use Table 7 on page I-25 to determine the decimal equivalent to the nearest portion of a cup and record the corresponding cup amount for the fruits contribution in the Expected Meal Pattern Contribution (Fruit–Cups) field or use the drop-down menu as shown, if using the RAW spreadsheet.

Recipe Name:	Harvest Deli	rvest Delight				Recipe:	50
Recipe Number:	Vegetables I	-21r			Serving Size	:	½ cup
Ingredients (a)	Quantity of Ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) ÷ (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total‡ ½ cups (b) x (e)= OR (d) x (e)= (f)	Convert to cups (f) ÷ 4= (g)	Total Cups Fruit per Serving (g) ÷ No. of Servings= (h)
Fresh green apples, peeled, cubed ½"	4.00000	0.78000	5.12821	6.80000	34.87179		
Dried cranberries, finely chopped	0.12500			13.80000	1.72500		
						0.1829 is between 0.125 and 0.249, therefore the apples and cranberries provide ½ cup fruit	
				Totals	36.59679	9.14920	0.18298
		Expected Mea	al Pattern Co	ntribution (l	Fruit—Cups)		-

All fruits are credited based on their volume served, except that dried fruit counts as twice the volume served. The ingredient quantity must be entered using the same weight or volume unit found in the FBG. If the recipe lists the ingredient in a different unit, you will need to make a conversion before the contribution can be calculated.

10. Record the Expected Meal Pattern Contribution for the fruits component amount on Figure 1g or the amount will self-populate if using the RAW spreadsheet. Doing so will combine the meal pattern contribution for the fruits component with the other meal components onto one worksheet for the recipe.

Meats/Meat Alternates Contribution Worksheet (Figure 1c)

Follow these steps to calculate the meats/meat alternates contribution per serving:

- 1. Record the name of the ingredient in the "Ingredients," Column (a).
- **2.** Enter the ingredient quantity in the "Quantity of Ingredient," Column (b) using the same weight or volume unit found in the "Purchase Unit," Column 2 in the FBG. If the recipe lists the ingredient in a different unit, convert it to the "Purchase Unit."

EXAMPLE 1: The Porcupine Sliders recipe contains 6 lb, 15½ oz of raw, ground turkey, lean and 2½ cups of liquid, whole egg. The FBG lists the Purchase Unit as "Pound" or "10 lb pkg" for turkey, ground, fresh or frozen, with skin in natural proportions, includes USDA Foods. The 6 lb do not need to be converted, but the 15½ oz must be converted to pounds. The liquid eggs are listed in the FBG with a Purchase Unit as "Pound" or "5 lb pkg" for eggs, frozen whole eggs, pasteurized Includes USDA Foods. Convert the 2½ cups to pounds using "Additional Information," Column 6 in the FBG, 1 lb frozen eggs = about 1½ cups. Both ingredients are listed in the correct unit on the worksheet in Column (b), as shown.

Recipe Name:	Porcupine Slider	rs		Serving	s per Recipe:	50
Recipe Number:	Sandwiches F-1	Or			Serving Size:	1 slider
Ingredient (a)	Quantity of Ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) + (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total† Ounces (b) x (e)= or (d) x (e) = (f)	Ounce Eq. M/MA per Serving (f) + Servings = (g)
Raw ground turkey, lean	6.96875	6 lb + (15.5	6.9687			
Liquid, whole egg	1.33330					
1. F cups 2. 2 3. 2	Per column 6 of th in decimal form) ⁷ 2 cups (or 2.5 in .5 cups ÷ 1.875 cu	ne FBG, 1 lb froz decimal form) cu 1ps/lb = 1.3333 l	en eggs = about 1ps liquid whole lbs liquid, whole	1% cups (or 1.8 eggs = ? lbs egg	875	

EXAMPLE 2: The Confetti Soup contains 5 lb, 10 oz of canned low-sodium black-eyed peas, drained, rinsed and 3 lb of turkey ham, extra-lean, diced ¼ inch. For the black-eyed peas, the FBG lists the Purchase Unit as "No. 10 can (108 oz)" and "No. 300 can (15 oz)" for beans, black-eyed (or peas), dry, canned, whole includes USDA Foods; convert the 5 lb, 10 oz to ounces. For the turkey ham, the FBG lists the Purchase Unit as "Pound" for turkey ham, fully cooked, chilled or frozen, 15% added ingredients, includes USDA Foods; the 3 lb does not need to be converted. Both ingredients are listed in the correct unit on the worksheet in Column (b), as shown:

Recipe Name:	Confetti Soup			Servings	per Recipe:	50
Recipe Number:	H-09r			5	1 cup	
Ingredient (a)	Quantity of Ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) ÷ (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total† Ounces (b) x (e)= or (d) x (e) = (f)	Ounce Eq. M/MA per Serving (f) ÷ Servings = (g)
Canned low-sodium black- eyed peas	90.00000	(5 lb x 16 c	oz/lb) + 10 oz = 9	a0 oz		
Turkey Ham, extra lean, diced ¼"	3.00000					

3. Record the preparation yield factor in "Preparation Yield," Column 6 in FBG, Column (c) for any meats/meat alternates ingredients that must be converted to match the form of the item as listed under "Food as Purchased," Column 1 of the FBG.

EXAMPLE 1: The 6.9687 lb of raw ground turkey, lean and the 1.3333 lb of liquid, whole egg are purchased in the same form as listed in the ingredients for the Porcupine Sliders recipe, so a preparation yield factor is not needed for these ingredients. Leave Column (c) on the worksheet blank, as shown:

Recipe Name:	Porcupine Slide	rs		Servings per Recipe: 50			
Recipe Number:	Recipe Number: Sandwiches F-10r				Serving Size:	1 slider	
Ingredient (a)	Quantity of Ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) ÷ (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total† Ounces (b) x (e)= or (d) x (e) = (f)	Ounce Eq. M/MA per Serving (f) + Servings = (g)	
Raw ground turkey, lean	6.96875						
Liquid, whole egg	1.33330						

EXAMPLE 2: The 3 pounds of turkey ham are purchased in the same form as listed in the Confetti Soup recipe (it just needs to be diced), so a preparation yield factor is not used for this ingredient. However, the 90 oz of canned low-sodium black-eyed peas, drained, rinsed are purchased in an undrained form, so a preparation yield factor is required for this ingredient. The FBG preparation yield factor is as follows: 1 No. 10 can = about 65.0 oz (93% cups) heated, drained beans.

Recipe Name:	Confetti Soup			Servings	per Recipe:	50
Recipe Number:	H-09r			s	1 cup	
Ingredient (a)	Quantity of Ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) ÷ (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total† Ounces (b) x (e)= or (d) x (e) = (f)	Ounce Eq. M/MA per Serving (f) ÷ Servings = (g)
Canned low-sodium black- eyed peas	90.00000	65.00000	Bronara	tion viold onto	urad in Column	
Turkey Ham, extra lean, diced ¼"	3.00000		Frepara	tion yield ente		

4. Calculate the quantity of each ingredient to purchase, if a preparation yield factor was used, and record the answer in "Calculated Quantity to Purchase," Column (d). This calculation is shown for the Confetti Soup and shows the number of No. 10 cans of black-eyed peas to purchase.

Recipe Name:	Confetti Soup			Servings	per Recipe:	50
Recipe Number:	H-09r			s	erving Size:	1 cup
Ingredient (a)	Quantity of Ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) ÷ (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total† Ounces (b) x (e)= or (d) x (e) = (f)	Ounce Eq. M/MA per Serving (f) ÷ Servings = (g)
Canned low-sodium black- eyed peas	90.00000	<u>6</u> 5.00000	1.38462	90.0000	÷ 65.0000 = 1	3846 cans
Turkey Ham, extra lean, diced ¼"	3.00000			You will need to open 2 cans of black-eyed peas.		

5. Enter the Servings per Purchase Unit in Column (e) for each ingredient, using the "Servings per Purchase Unit, EP," Column 3 of the FBG.

EXAMPLE: In the Confetti Soup recipe, the canned low-sodium black-eyed peas, drained, rinsed are served heated. "Servings per Purchase Unit, EP," Column 3 of the FBG lists two options for beans, black-eyed (or peas), dry, canned whole, includes USDA Foods, 37.7 or 25.1 for a No. 10 can (108 oz). By looking at the next column in the FBG, "Serving Size per Meal Contribution," Column 4, 37.7 refers to ¼ cups of heated, drained beans and 25.1 refers to ³/₈ cups of heated, drained beans. Since the meal contribution is based on ¼ cup servings (1 oz equivalent of meat alternate), 37.7 is entered in the "Servings per Purchase Unit," Column 3 in the FBG, Column (e). For the turkey ham, extra-lean, diced, ¼ inch, Column 3 of the FBG lists two options, 9.41 or 6.27 for 1 lb. By looking at Column 4, 9.41 refers to a 1.7 oz serving (1 oz cooked turkey) and 6.27 refers to a 2.6 oz serving (1½ oz cooked turkey). In this case, 9.41 is entered in the "Servings per Purchase Unit," Column 3 in the FBG since it is based on a serving size of 1.0 oz equivalent meat, as shown:

Recipe Name:	Confetti Soup			Servings per Recipe:		50
Recipe Number:	H-09r			s	erving Size:	1 cup
Ingredient (a)	Quantity of Ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) ÷ (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total† Ounces (b) x (e)= or (d) x (e) = (f)	Ounce Eq. M/MA per Serving (f) ÷ Servings = (g)
Canned low-sodium black- eyed peas	90.00000	65.00000	1.38462	37.70000)	
Turkey Ham, extra lean, diced ¼"	3.00000			9.41000		

 Enter the "Total Ounces," Column (f) for each ingredient by multiplying the numbers in Columns (b) and (e), if a preparation yield is not utilized, or multiplying the numbers in Columns (d) and (e), if a preparation yield is used.

EXAMPLE 1: For the Porcupine Sliders recipe, a preparation yield was not used for the turkey and egg ingredients, so the numbers in Column (b) are multiplied by the numbers in Column (e), as shown:

Recipe Name:	Porcupine Sl	iders		Servings	per Recipe:	50
Recipe Number:	Sandwiches	F-10r		Serving Size:		1 slider
Ingredient (a)	Quantity of Ingredient (b)	Preparatio n Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) ÷ (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total† Ounces (b) x (e)= or (d) x (e) = (f)	Ounce Eq. M/MA per Serving (f) ÷ Servings = (g)
Raw ground turkey, lean	6.96875			11.20000	78.05000	
			6.968	37 x 11.2000 =	78.0500	
Totals Expected Meal Pattern Contribution (Meat/Meat Alternate—oz eq)						



The total ounces for the meats/meat alternates component are totaled, as circled in red above. The Total Ounces amount is 102.0494.

EXAMPLE 2: For the Confetti Soup, a preparation yield was used for the black-eyed peas, so the number in Column (d) is multiplied by the number in Column (e). The turkey ham did not use a preparation yield, so the number in Column (b) is multiplied by the number in Column (e), as shown:

Recipe Name:	Confetti Soup			Servings per Recipe:		50	
Recipe Number:	H-09r	H-09r			Serving Size: 1 cur		
Ingredient (a)	Quantity of Ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) ÷ (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total† Ounces (b) x (e)= or (d) x (e) = (f)	Ounce Eq. M/MA per Serving (f) ÷ Servings = (g)	
Canned low-sodium black- eyed peas	90.00000	<mark>6</mark> 5.00000	1.38462	37.70000	52.20000		
Turkey Ham, extra lean, diced ¼"	3.00000			9.41000	28.23000		
			1.3846 x 37.7000 = 52.2000 3.0000 x 9.4100 = 28.2300				
				Totals	80.43000		
Expected Me	al Pattern Con	ntribution (Mea	t/Meat Alteri	nate—oz eq)			

The total ounces for the meats/meat alternates component are totaled, as circled in red. The Total Ounces amount is 80.4300.

7. Calculate the ounce equivalent per serving for the meats/meat alternates component, and record this number in "Ounce Eq. M/MA per Serving," Column (g). This calculation is done by dividing the number of total ounces in Column (f) by the number of servings per recipe, as shown:

Recipe Name: Confetti Soup			Servings per Recipe: 50				
Recipe Number:	Recipe Number: H-09r			s	Serving Size: 1 cup		
Ingredient (a)	Quantity of Ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) + (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total† Ounces (b) x (e)= or (d) x (e) = (f)	Ounce Eq. M/MA per Serving (f) + Servings = (g)	
Canned low-sodium black- eyed peas	90.00000	65.00000	1.38462	37.70000	52.20000		
Turkey Ham, extra lean, diced ¼"	3.00000			9.41000	28.23000		
				(80.4300 ÷ 50	0 = 1.6086	
				Totals	80.43000	1.60860	

8. Determine the expected meal pattern contribution for the meats/meat alternates component by rounding the amount in Column (g) "Ounce Eq. M/MA per Serving" down to the nearest quarter ounce and record this amount in the Expected Meal Pattern Contribution (Meat/Meat Alternate–oz eq) field, or if using the RAW spreadsheet, use the drop-down menu as shown.

Recipe Name:	Confetti Soup			Servings per Recipe: 50		
Recipe Number:	H-09r			s	erving Size:	1 cup
Ingredient (a)	Quantity of Ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) ÷ (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total† Ounces (b) x (e)= or (d) x (e) = (f)	Ounce Eq. M/MA per Serving (f) ÷ Servings = (g)
Canned low-sodium black- eyed peas	90.00000	<mark>6</mark> 5.00000	1.38462	37.70000	52.20000	
Turkey Ham, extra lean, diced ¼"	3.00000			9.41000	28.23000	
			1.6086 needs to be rounded down to the nearest 0.25 oz, so the black-eyed peas and turkey ham provide 1.50 oz eq meat/meat alternate.			
				Totals	80.43000	1.60860
Expected Me	al Pattern Con	ntribution (Mea	at/Meat Altern	nate—oz eq)		

Cooked dry beans or peas may be used as a meat alternate or as a vegetable, but not as both components in the same meal.

The ingredient quantity must be entered using the same weight or volume unit found in the FBG. If the recipe lists the ingredient in a different unit, you will need to make a conversion before the contribution can be calculated.

9. Record the Expected Meal Pattern Contribution for the meats/meat alternates component amount on Figure 1g or the amount will self-populate if using the RAW spreadsheet. Doing so will combine the meal pattern contribution for the meats/meat alternates component with the other meal components onto one worksheet for the recipe.



Grains Contribution Worksheets

The grains contribution is calculated three different ways, using Method A, B, or C, depending on the type of grain product. Use the method that best fits your recipe.

- Method A is used to calculate the grains contribution based on finished weight of purchased items using Exhibit A: Grain Requirements for Child Nutrition Programs.
- Method B is used to determine the grains contribution for items using yield data from Section 4 in the FBG.
- Method C is used to calculate the grains contribution using the grams of creditable grains when (1) the grain product is made at the site/locally, or (2) the manufacturer's Product Formulation Statement provides the grams of creditable grains per portion.

Grains: Method A (Figure 1d)

1. Record only the recipe's grain ingredients that are purchased as a finished product, as listed in Exhibit A in "Product Description per Exhibit A," Column (a).

EXAMPLE: If a recipe contains 1 lb (16 oz) of purchased, low-fat granola, no fruit, locate the granola in Exhibit A under Group I, Ready-to-eat breakfast cereal and record the ingredient name in Column (a), as shown.

METHOD A—GRAINS CONTRIBUTION—USING EXHIBIT A: GRAIN REQUIREMENTS FOR CHILD NUTRITION PROGRAMS							
Recipe Name:	Central Valley Ha	rvest Bake	Servings per Recipe:	50			
Recipe Number:	I-20r		Serving Size:	½ cup			
Product Description per Exhibit A (a) Low fat granola, no fruit	Quantity of Product (oz, gm, or cups)* (b)	Exhibit A weight for 1 oz eq (c)	Creditable Amount (b) + (c)= (d)	Creditable Grain Amount per No. of Servings (e)			

2. Enter the ingredient quantity in the "Quantity of Product," Column (b) in ounces, grams, or cups.

METHOD A—GRAINS CONTRIBUTION—USING EXHIBIT A: GRAIN REQUIREMENTS FOR CHILD NUTRITION PROGRAMS							
Recipe Name:	Central Valley Har	vest Bake	Servings per Recipe:	50			
Recipe Number:	I-20r		Serving Size: ½ cup				
Product Description per Exhibit A (a)	Quantity of Product (oz, gm, or cups)* (b)	Exhibit A weight for 1 oz eq (c)	Creditable Amount (b) ÷ (c)= (d)	Creditable Grain Amount per No. of Servings (e)			
Low fat granola, no fruit	16.00000						

EXAMPLE: The 1 lb of granola is entered in ounces, as shown. There are 16 ounces in one pound.

3. Enter the weight for 1 oz eq of the ingredient as stated on Exhibit A.

EXAMPLE: Using Exhibit A, under the column "Oz Eq for Group I," $1 \text{ oz eq} = \frac{1}{4} \text{ cup or } 1$ ounce of granola. So, 1 oz of purchased granola is equal to 1 oz eq grains. Record this number in Column (c), as shown.

METHOD A—GRAINS CONTRIBUTION—USING EXHIBIT A: GRAIN REQUIREMENTS FOR CHILD NUTRITION PROGRAMS							
Recipe Name:	Central Valley Har	vest Bake	Servings per Recipe:	50			
Recipe Number:	I-20r		Serving Size:	³ ⁄₂ cup			
Product Description per Exhibit A (a)	Quantity of Product (oz, gm, or cups)* (b)	Exhibit A weight for 1 oz eq (c)	Creditable Amount (b) ÷ (c)= (d)	Creditable Grain Amount per No. of Servings (e)			
Low fat granola, no fruit	16.00000	1.00000					

4. Calculate the creditable amount of each purchased grains ingredient, and record the answer in "Creditable Amount," Column (d). This following calculation is provided for low-fat granola, no fruit.

METHOD A—GRAINS CONTRIBUTION—USING EXHIBIT A: GRAIN REQUIREMENTS FOR CHILD NUTRITION PROGRAMS							
Recipe Name:	Central Valley Har	vest Bake	Servings per Recipe:	50			
Recipe Number:	I-20r	-	Serving Size:	¹ ⁄₂ cup			
Product Description per Exhibit A (a)	Quantity of Product (oz, gm, or cups)* (b)	Exhibit A weight for 1 oz eq (c)	Creditable Amount (b) ÷ (c)= (d)	Creditable Grain Amount per No. of Servings (e)			
Low fat granola, no fruit	16.00000	1.00000	16.00000,	16.0000 ÷ 1.0000 = 16.0000			
	•	Totals	16.00000				

The total creditable amount is totaled, as circled in red above. The sum for Creditable Amount is 16.0000.

 Calculate the creditable grains amount per serving by dividing the creditable amount in Column (d) by the number of servings per recipe and record this number in "Creditable Grains Amount per No. of Servings," Column (e), as shown.

METHOD A—GRAINS CONTRIBUTION—USING EXHIBIT A: GRAIN REQUIREMENTS FOR CHILD NUTRITION PROGRAMS							
Recipe Name:	Central Valley Ha	vest Bake	Servings per Recipe:	50			
Recipe Number:	I-20r		Serving Size:	½ cup			
Product Description per Exhibit A (a)	Quantity of Product (oz, gm, or cups)* (b)	Exhibit A weight for 1 oz eq (c)	Creditable Amount (b) ÷ (c)= (d)	Creditable Grain Amount per No. of Servings (e)			
Low fat granola, no fruit	16.00000	1.00000	16.00000				
				16.0000 ÷ 50 = 0.3200			
	16.00000	0.32000					

6. Determine the expected meal pattern contribution for the Method A–grains component by rounding the amount in Column (e) "Creditable Grains Amount per No. of Servings" down to the nearest quarter ounce and record this amount in the Expected Meal Pattern Contribution (Grains—oz eq) field, or if using the RAW spreadsheet, use the drop-down menu as shown.

METHOD A—GRAINS CONTRIBUTION—USING EXHIBIT A: GRAIN REQUIREMENTS FOR CHILD NUTRITION PROGRAMS							
Recipe Name:	Central Valley Har	vest Bake	Servings per Recipe:	50			
Recipe Number:	I-20r		Serving Size:	¹ ⁄₂ cup			
Product Description per Exhibit A (a)	Quantity of Product (oz, gm, or cups)* (b)	Exhibit A weight for 1 oz eq (c)	Creditable Amount (b) ÷ (c)= (d)	Creditable Grain Amount per No. of Servings (e)			
Low fat granola, no fruit	16.00000	1.00000	16.00000	0.3200 needs to be rounded to the nearest 0.25 oz, so the low-fat granola, no fruit provides 0.25 oz eq grains.			
	•	Totals	16.00000	0.32000			
EXI	0.25 🗸						

* The Quantity of Product in Column (b) must be in the same unit as the oz eq listed in Exhibit A, Groups A-I.

7. Record the Expected Meal Pattern Contribution for the Method A–grains component amount on Figure 1g or the amount will self-populate if using the RAW spreadsheet. Doing so will combine the meal pattern contribution for the Method A–grains component with the other meal components onto one worksheet for the recipe.

Grains: Method B (Figure 1e)

1. Record the recipe's creditable grain ingredients (e.g., Pasta, Elbow Macaroni, Whole Wheat, Regular, Dry) as listed in the Grains section of the FBG in "Ingredients," Column (a).

EXAMPLE: If a recipe contains 6 lb dry, long grain, brown rice, record the ingredient name in Column (a) as it is listed in the FBG, as shown.

METHOD B—GRAINS CONTRIBUTION—USING YIELD FROM FOOD BUYING GUIDE									
Recipe Name:	Stir-Fried Fajita Chicken,	Squash, and Corn	Servings per Recipe:	50					
Recipe Number:	D-60r		Serving Size:	⅔ cup					
Ingredient as listed in FBG (a)	Quantity of Ingredient* (b)	Servings per Purchase Unit Column 3 in FBG** (c)	Creditable Grain Amount (b) x (c)= (d)	Creditable Grain Amount per No. of Servings (d) + No. of Servings= (e)					
Brown rice, long-grain, regular, dry									

2. Enter the ingredient quantity using the same weight or volume unit found in the FBG.

EXAMPLE: The 6 lb brown rice is entered, as shown.

METHOD B—GRAINS CONTRIBUTION—USING YIELD FROM FOOD BUYING GUIDE							
Recipe Name:	Stir-Fried Fajita Chicken, S	Squash, and Corn	Servings per Recipe:	50			
Recipe Number:	D-60r		Serving Size: ½ cup				
Ingredient as listed in FBG (a)	Quantity of Ingredient* (b)	Servings per Purchase Unit Column 3 in FBG** (c)	Creditable Grain Amount (b) x (c)= (d)	Creditable Grain Amount per No. of Servings (d) ÷ No. of Servings= (e)			
Brown rice, long-grain, regular, dry	6.00000						

3. Enter the Servings per Purchase Unit in Column (c) for each ingredient, using the "Servings per Purchase Unit, EP," Column 3 of the FBG.

EXAMPLE: For the brown rice, "Servings per Purchase Unit, EP," Column 3 of the FBG lists three options, 26.00, 13.00 or 8.66 for a pound of rice, brown, long grain, regular, dry. By looking at the next column in the FBG, "Serving Size per Meal Contribution," Column 4, 26.00 refers to ¼ cups cooked, 13.00 refers to ½ cups cooked, and 8.66 refers to ¾ cups of cooked brown rice. Since the serving size for this recipe is a ½ cup cooked brown rice, enter 13.00 in the "Servings per Purchase Unit," Column 3 in the FBG, Column (c), as shown.

METHOD B—GRAINS CONTRIBUTION—USING YIELD FROM FOOD BUYING GUIDE							
Recipe Name:	Stir-Fried Fajita Chicken, S	Squash, and Corn	Servings per Recipe:	50			
Recipe Number:	D-60r		Serving Size:	½ cup			
Ingredient as listed in FBG (a)	Quantity of Servings per Quantity of Purchase Unit Column Ingredient* 3 (b) in FBG** (c)		Creditable Grain Amount (b) x (c)= (d)	Creditable Grain Amount per No. of Servings (d) ÷ No. of Servings= (e)			
Brown rice, long-grain, regular, dry	6.00000	13.0000					

4. Calculate the creditable amount of each grain ingredient and record the answer in "Creditable Grains Amount," Column (d). This is performed in the following calculation for the brown rice.

METHOD B—GRAINS CONT	RIBUTION—USING Y	IELD FROM FOOD BUYING O	GUIDE	
Recipe Name:	Stir-Fried Fajita Chic	ken, Squash, and Corn	Servings per Recipe:	50
Recipe Number:	D-60r		Serving Size:	^y ₂ cup
Ingredient as listed in FBG (a)	Quantity of Ingredient* (b)	Servings per Purchase Unit Column 3 in FBG** (c)	Creditable Grain Amount (b) x (c)= (d)	Creditable Grain Amount per No. of Servings (d) ÷ No. of Servings= (e)
Brown rice, long-grain, regular, dry	6.00000	13.0000	78.0000	6.0000 x 13.0000 = 78.0000
	I I	Totals	78.0000	
	EXPECT	ED MEAL PATTERN CONTRI	BUTION (GRAINS—oz eq)	•

The total creditable amount is totaled, as circled in red. The sum for Creditable Amount is 78.0000.

Appendix A

5. Calculate the creditable grains amount per serving by dividing the creditable amount in Column (d) by the number of servings per recipe and record this number in "Creditable Grains Amount per No. of Servings," Column (e), as shown.

METHOD B-GRAINS CONT				
Recipe Name:	Stir-Fried Fajita Chic	ken, Squash, and Corn	Servings per Recipe:	50
Recipe Number:	D-60r		Serving Size:	½ cup
Ingredient as listed in FBG (a)	Quantity of Ingredient* (b)	Servings per Purchase Unit Column 3 in FBG** (c)	Creditable Grain Amount (b) x (c)= (d)	Creditable Grain Amount per No. of Servings (d) ÷ No. of Servings= (e)
Brown rice, long-grain, regular, dry	6.00000	13.0000	78.0000	
				78.0000 ÷ 50 = 1.5600
	1.5600			
	•			

6. Determine the expected meal pattern contribution for the Method B-grains component by rounding the amount in Column (e), "Creditable Grains Amount per No. of Servings" down to the nearest quarter ounce and record this amount in the Expected Meal Pattern Contribution (Grains-oz eq) field, or if using the RAW spreadsheet, use the drop-down menu as shown.

METHOD B-CPAINS CONT				
METHOD B-GRAINS CONT	RIBOTION-OSING I	IELD FROM FOOD BOTING C	TOIDE	
Recipe Name:	Stir-Fried Fajita Chic	ken, Squash, and Corn	Servings per Recipe:	50
Recipe Number:	D-60r		Serving Size:	½ cup
Ingredient as listed in FBG (a)	Servings per Purchase Unit Column 3 Quantity of Ingredient* (b)		Creditable Grain Amount (b) x (c)= (d)	Creditable Grain Amount per No. of Servings (d) ÷ No. of Servings= (e)
Brown rice, long-grain, regular, dry	6.00000	13.0000	78.0000	
				1.5600 needs to be rounded down to the
				nearest 0.25 oz eq;
				therefore, a ½ cup serving
				of the recipe provides
				1.50 02 eq granis.
				\leq
	1.5600			
	1.50 💌			

* The Quantity of Ingredient in Column (b) must be in the same unit as the Purchase Unit, Column 2 of the FBG. ** Use Serving Size per Meal Contribution, FBG Column 4, that provides 1 ounce equivalency (oz eq); ½ cup cooked

- 7. Record the Expected Meal Pattern Contribution for the Method B-grains component amount on Figure 1g or the amount will self-populate if using the RAW spreadsheet. Doing so will combine the meal pattern contribution for the Method B-grains component with the other meal components onto one worksheet for the recipe.

Grains: Method C (Figure 1f)

1. Record the recipe's creditable grain ingredients in "Ingredients," Column (a).

EXAMPLE: If a recipe contains 1 lb, 14 oz of whole wheat flour and 1 lb, 12 oz of enriched flour, record these grain ingredient(s) in Column (a), as shown.

METHOD C—GRAINS CONTR Exhibit A	IBUTION—USING TH	HE GRAMS OF CR	EDITABLE GRAINS for gr	ain products listed in
Recipe Name:	Whole Grain-rich Pi	izza Crust	Servings per Recipe:	50
Recipe Number:			Serving Size:	1 slice
Creditable Grain Ingredient (a)	Quantity of ingredient in ounces (b)	Convert to Grams Creditable Grains (b) x 28.35= (c)	Total Grams Creditable Grains per No. of Servings (c) + No. of Servings = (d)	Select Standard Amount from Drop-down Menu (16 g or 28g)* (d) + Standard Amount = (e)
Whole wheat flour				
Enriched flour				

2. Enter the ingredient quantity in ounces in the "Quantity of ingredients in ounces," Column (b).

EXAMPLE: The 1 lb, 14 oz of whole wheat flour and 1 lb, 12 oz of enriched flour are converted to ounces and entered, as shown.

METHOD C—GRAINS CONTR Exhibit A	IBUTION—USING TH	IE GRAMS OF CR	EDITABLE GRAINS for gr	ain products listed in
Recipe Name:	Whole Grain-rich Pi	izza Crust	Servings per Recipe:	50
Recipe Number:			Serving Size:	1 slice
Creditable Grain Ingredient (a)	Quantity of ingredient in ounces (b)	Convert to Grams Creditable Grains (b) x 28.35= (c)	Total Grams Creditable Grains per No. of Servings (c) + No. of Servings = (d)	Select Standard Amount from Drop-down Menu (16g or 28g)* (d) + Standard Amount = (e)
Whole wheat flour	30.00000	(1.1) - 16 -	(11) + 14 00	
Enriched flour	28.00000	(1 lb x 16 o) (1 lb x 16 o)	z/1b) + 12 oz = 28 oz	

- **3.** Record the conversion factor of 28.35 to convert the ingredient in ounces to grams in Column (c), "Conversion Factor to Grams."
- 4. Calculate the grams of creditable grains by multiplying the quantity of ingredient in Column (b) by 28.35 in Column (c) and record this number in Column (d), "Total Grams Creditable Grains" or if using the RAW spreadsheet, the grams of creditable grains are auto-calculated in Column (c), "Convert to Grams Creditable Grains," as shown.

METHOD C—GRAINS CONTRI Exhibit A	IBUTION—USING TH	E GRAMS OF CRI	EDITABLE GRAINS for gra	ain products listed in
Recipe Name:	Whole Grain-rich Pi	zza Crust	Servings per Recipe:	50
Recipe Number:			Serving Size:	1 slice
Creditable Grain Ingredient (a)	Quantity of ingredient in ounces (b)	Convert to Grams Creditable Grains (b) x 28.35= (c)	Total Grams Creditable Grains per No. of Servings (c) + No. of Servings = (d)	Select Standard Amount from Drop-down Menu (16g or 28g)* (d) + Standard Amount = (e)
Whole wheat flour	30.00000	850.50000		-
Enriched flour	28.00000	793.80000		
	Totals	1644.30000		

The creditable amount is totaled, as circled in red. The sum for the Creditable Amount in grams is 1644.3000.

5. Calculate the creditable grains amount per serving by dividing the creditable amount in grams in Column (c) by the number of servings per recipe, and record this number in Column (e), "Total Grams Creditable Grains Serving," or if using the RAW spreadsheet, this amount is auto-calculated in Column (d), as shown.

METHOD C—GRAINS CONTR Exhibit A	RIBUTION—USING TH	HE GRAMS OF CR	EDITABLE GRAINS for g	rain prod	ucts listed in
Recipe Name:	Whole Grain-rich Pi	zza Crust	Servings per Recipe:	50	
Recipe Number:			Serving Size:	1 slice	
Creditable Grain Ingredient (a)	Quantity of ingredient in ounces* (b)	Convert to Grams Creditable Grains (b) x 28.35= (c)	Total Grams Creditable Grains per No. of Servings (c) + No. of Servings = (d)	Creditable Grains per Portion by Reference Amount (16 (d) + 16 g = (e)	
Whole wheat flour	30.00000	850.50000			
Enriched flour	28.00000	793.80000			
			1644.3000÷5	50 = 32.886	50
	Totals	1644.30000	32.88600		

6. Divide the grams of creditable grains per serving in Column (e) by the standard amount of either 16 grams or 28 grams per oz equivalent and record this number in Column (f), "Creditable Grains per Portion by Standard Amount (16g or 28g)." Grain products listed in Exhibit A, Groups A–G use the standard of 16 grams creditable grains per oz eq and those listed in Groups H and I use the standard of 28 grams creditable grains per oz eq. If using the RAW spreadsheet, select the standard amount from the drop-down menu. As shown for this example, 16g is selected as the standard amount because pizza crust is listed in Group B of Exhibit A. The creditable grains per serving by standard amount is then autocalculated in Column (e), as shown.

METHOD C—GRAINS CONTE Exhibit A	RIBUTION—USING TH	IE GRAMS OF CR	EDITABLE GRAINS for g	rain products listed in
Recipe Name:	Whole Grain-rich Piz	zza Crust	Servings per Recipe:	50
Recipe Number:			Serving Size:	1 slice
Creditable Grain Ingredient (a)	Quantity of ingredient in ounces* (b)	Convert to Grams Creditable Grains (b) x 28.35= (c)	Total Grams Creditable Grains per No. of Servings (c) + No. of Servings = (d)	Select Standard Amount from Drop-down Menu (16g or 28g)* (d) + Standard Amount = (e)
Whole wheat flour	30.00000	850.50000		16 💌
Enriched flour	28.00000	793.80000		
			C	32.8860 ÷ 16 = 2.0553
	Totals	1644.30000	32.88600	2.05538

7. Determine the Expected Meal Pattern Contribution for the Method C–grains component by rounding the amount in Column (f), "Creditable Grains per Portion by Standard Amount (16g or 28g)" down to the nearest quarter ounce and record this amount in the Expected Meal Pattern Contribution (Grains–oz eq) field, or if using the RAW spreadsheet, use the amount in Column (e) and the drop-down menu as shown.

Recipe Name:	Whole Grain-rich Pi	zza Crust	Servings per Recipe:	50
Recipe Number:			Serving Size:	1 slice
Creditable Grain Ingredient (a)	Quantity of ingredient in ounces (b)	Convert to Grains Creditable Grains (b) x 28.35 = (c)	Total Grams Creditable Grains per No. of Servings (c) + No. of Servings = (d)	Select Standard Amount from Drop-down Menu (16g or 28g)* (d) ÷ Standard Amount = (e)
Whole wheat flour	30.00000	850.50000		16 🗸
			2.0553 needs to be rounded down to the nearest 0.25 oz eq; therefore, 1 slice of the pizza crust provides 2.00 oz eq grains.	
	Totals	1644.30000	32.88600	2.05538
	EXPECTED MEAL F	ATTERN CONTRI	BUTION (GRAINS—oz eq)	2
*Refer to Exhibit A: Grain Requ is listed. Grain products listed listed in Groups H and I use th therefore, the standard amoun ingredients.	uirements for Child N in Exhibit A, Groups as standard of 28g cre t of 16g should be sel	utrition Programs A-G use the stand ditable grains per ected to determine	to determine which group lard of 16g creditable grair oz eq. For example, panca e the grains contribution fo	the finished grain product as per oz eq and those kes are listed in Group C; or the creditable

 Record the Expected Meal Pattern Contribution for the Method C–grains component amount on Figure 1g or the amount will self-populate if using the RAW spreadsheet. Doing so will combine the meal pattern contribution for the Method C–grains component with the other meal components onto one worksheet for the recipe.



Expected Meal Pattern Contribution per Serving (Figure 1g)

When using the RAW spreadsheet, this template is self-populated as the meal pattern contribution is calculated for the different meal components of a recipe, or you may record these amounts on Figure 1g.

Recipe Name:	Porcupine SI	liders					
Recipe Number:	Sandwiches	F-10r					
Servings per Recipe:	50						
Serving Size:	1 slider						
Do not fill in the meal con	mponents belo	w. Each com	ponent will fill	in auton	natically fi	rom their res	pective worksheets. You ma
then use that information	to write in you	ur final expec	cted meal patte	ern contri	ibution at	the bottom o	of this page (see box below).
	Beans, Peas, & Lentils	Dark Green	Red/ Orange	Starchy	Other	Additional	
Vegetables—cup(s)							1
							-
Fruits—cup(s)							
7							
Meat/MA-oz eq	2.00						
Grains—A (oz eq)	1.00						
Grains—B (oz eq)							
Grains—C (oz eq)							
Total Grains (oz eq)	1.00						
, 1/							
EXPECTED MEAL PATTI	ERN CONTRIE	BUTION PER	SERVING (Fil	ll in/Writ	te final n	ieal contribu	ition statement using

above meal components.)

1 slider provides 2.00 oz eq meat/meat alternate and 1.00 oz eq grains.

Recipe Analysis Workbook templates

Following are templates for each worksheet in the RAW (Figures 1a–1g) to be completed in a hard copy format. They can be printed and/or copied to help you determine the meal pattern contribution for recipes served in the Child Nutrition Programs (CNP).

The RAW is also available in a spreadsheet format upon request to the CNP-NTAB mailbox at cnpntab@fns.usda.gov and an interactive, web-based RAW tool is available at https:// foodbuyingguide.usda.gov. Use of this workbook in the web-based format is recommended to obtain the maximum benefit; however, the examples in this appendix have been tailored to both the spreadsheet and hard copy format for your convenience.

Figure 1a Vegetables (w/Subgroups) Contribution

Recipe Name:	10:				Servings per Recipe:				
Recipe Number:								Serving Size:	
Ingredients (a)	Quantity of Ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) * (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total‡ ¾ cups (b) x (c)= OR (d) x (c)= (f)	Convert to cups (f) * 4= (g)	Total Cups Vegetable per Serving (g) ÷ No. of Servings= (h)	Decimal Eq. to the Nearest Portion of a Cup (i)	Remaining (j)
Beans, Peas, and Lentils									
						1			
		Beans, P	eas, and Len	tils Totals					
Dark Green									
							-		
			Dark Gı	een Totals					
Red/Orange									
			D 1/0	(T) (1)			1		
Changelon			Red/Ora	inge Totals		ļ			
Starchy									
						-			
						-			
						-			
						-			
			Star	chy Totale			1		
Other			Jta	suy routs			·		
5 third									
			0	ther Totals					
Total Remaining Eq Cup Volume									
(1)	(1	n)							
Expected Meal Pat	tern Contrib	ution (Vegeta	ble - Cups):						
Remaining vegetables may be	added to you	r "Other" or "A	dditional" si	ubgroup. Fo	or more infor	mation on	vegetable su	bgroup categories p	lease see
Meel Pattern Contribution	Specifications	chart (www.i	ns.usda.gov	/cnd/gover	nance/legisl	auon/dieta	ryspecs.pdf	. rou may use the ".	Expected
mean rattern Contribution per	berving boy	ton the mean	attern Con	moution ta	o to override	your vegeta	able contribu	10011.	

- Other vegetables requirement may be met with any additional amounts from only the Dark Green; Red/Orange; and Beans, Peas, and Lentils vegetable subgroups.
- Remember to add any remaining or fractions of vegetables not used to meet the five subgroups to Additional vegetables in the recipe.
- Raw leafy greens count as half the volume served and tomato paste and purees are credited on calculated volume of the whole food equivalency.
- Cooked beans, peas, or lentils may be used as a vegetable or as a meat alternate, but not as both components in the same meal.
- Please make sure all units are the same. If the ingredient quantity is not in the preferred weight or volume, conversions will need to be made before the contribution can be calculated.
- For vegetable subgroup information, click here to go to CNPP's Vegetable Subgroup List at: https://fns.usda.gov/sites/default/files/resource-files/cnpp-appendixe-3.1.a2-ItemClusters. pdf.



Figure 1b

Fruits Contribution

Recipe Name:					Serving	s per Recipe:	
Recipe Number:						Serving Size:	
Ingredient (a)	Quantity of Ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) + (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total‡ ½ cups (b) x (e)= or (d) x (e) = (f)	Convert to cups (f) + 4 = (g)	Total cups Fruit Per Serving (g) ÷ No. of Servings = (h)
				Totals			
		Expected Me	al Pattern Co	ntribution (I	ruit—Cuns)		
"All fruits are credited	² All fruits are credited based on their volume served, excent that dried fruit counts as twice the volume served						erved.
•The ingredient quant	The ingredient quantity must be entered using the same weight or volume unit found in the FBG. If the recipe lists						
the ingredient in a diff	he ingredient in a different unit, you will need to make a conversion before the contribution can be calculated.						

Figure 1c Meats/Meat Alternates Contribution

Recipe Name:				Serving	gs per Recipe:	
Recipe Number:		4			Serving Size:)
Ingredient (a)	Quantity of Ingredient (b)	Preparation Yield Column 6 in FBG (c)	Calculated Quantity to Purchase (b) ÷ (c)= (d)	Servings per Purchase Unit Column 3 in FBG (e)	Total Ounces (b) x (e)= or (d) x (e) = (f)	Ounce Eq. M/MA per Serving (f) ÷ Servings = (g)
				Totals		
Expecte	d Meal Pattern	Contribution	(Meat/Meat Al	ternate—oz eq)		
 Cooked dry beans or peas may be used as The ingredient quantity must be entered u different unit, you will need to make a conv 	a meat alterna sing the same v ersion before th	e or as a vegeta veight or volum ne contribution o	ble, but not as e unit found in can be calculate	both component the FBG. If the r d.	s in the same r recipe lists the	neal. ingredient in a

Figure 1d Grains Contribution using Method A, B, or C

Recipe Name:			Servings per Recipe:	
Recipe Number:			Serving Size:	
Product Description per Exhibit A (a)	Quantity of Product/Ingredient (b)	Exhibit A weight for 1 oz eq (c)	Creditable Amount (b) ÷ (c)= (d)	Creditable Grain Amount per No. of Servings (e)
	7			
		Totals		
	EXPECTED MEAL	PATTERN CONTRIBU	TION (GRAINS-oz eq)	
Make sure all units are the same. If the eed to be made before the contribution c	ingredient quantity is an be calculated.	not in the preferred	weight or volume, con	versions will

Figure 1e Grains Contribution by Methods A, B, or C (cont'd)

Recipe Name:			Servings perRecipe:	
Recipe Number:			Serving Size:	
Ingredient (a)	Quantity of Ingredient as Purchased (number of purchase usits) (b)	Servings per Purchase Unit in Food Buying Guide (c)	Creditable Grain Amount (b) x (c)= (d)	Creditable Grain Amount per No. of Servings (d) ÷ No. of Servings= (e)
				- - - -
		Tatala		

The Quantity of Ingredient in Column (b) must be in the same unit as the Purchase Unit, Column 2 of the FBG. Use Serving Size per Meal Contribution, FBG Column 4, that provides 1 ounce equivalent (oz eq); ½ cup cooked.



Figure 1f

Grains Contribution by Methods A, B, or C (cont'd)

METHOD C—GRAI Exhibit A	NS CONTRIBUTIO	N—USING THE GI	RAMS OF CREDI	TABLE GRAINS for grain p	roducts listed in
Recipe Name:				Servings per Recipe:	
Recipe Number:				Serving Size:	
Creditable Grain Ingredient (a)	Quantity of ingredient (b)	Conversion factor to Grams (c)	Total Grams Creditable Grains (b) x (c)= (d)	Total Grams Creditable Grains per No. of Servings (d) - No. of Servings = (e)	Creditable Grains per Portion by Standard Amount (16g or 28g)* (e) ÷ Standard Amount = (f)
				- - -	
		2. 2 3. 7			
		Totals			
	EZ	EXPECTED MEAL P.	ATTERN CONTR	IBUTION (GRAINS-oz eq)	

Make sure all units are the same. If the ingredient quantity is not in the preferred weight or volume, conversions will need to be made before the contribution can be calculated. *Refer to Exhibit A: Grain Requirements for Child Nutrition Programs to determine which group the finished grain product is listed.

*Refer to Exhibit A: Grain Requirements for Child Nutrition Programs to determine which group the finished grain product is listed. Grain products listed in Exhibit A, Groups A–G use the standard of 16g creditable grains per oz eq and those listed in Groups H and I use the standard of 28g creditable grains per oz eq. For example, pancakes are listed in Group C; therefore, the standard amount of 16g should be selected to determine the grains contribution for the creditable ingredients.

Figure 1g

Recipe Name:	
Recipe Number:	
Servings per Recipe:	
Serving Size:	
Vegetables—cup(s)	
Fruits—cup(s)	
Meat/Meat Alternate—oz eq	
Grains—A (oz eq)	
Grains—B (oz eq)	
Grains—C (oz eg)	
Total Grains (oz eq)	

EXPECTED MEAL PATTERN CONTRIBUTION PER SERVING

X (cup, oz, piece, portion, etc.) provides X oz eq meat/meat alternate, X cup vegetable(X cup beans, peas, and lentils; X cup dark green vegetable; X cup red/orange vegetable; X cup other vegetable; X cup starchy vegetable; X cup additional vegetable) X cup fruit, and X oz eq grains.