



Kitchen Math & Menu Planning - Helpful Formulas:

Yield Factor Method for Increasing or Decreasing a Recipe

Step 1: Find the Scaling Factor

Divide the number of servings you **need** by the number of servings the recipe **makes**.

Step 2: Multiply Each Ingredient by the Factor

Multiply each amount in the recipe by the scaling factor.

Example: Scaling Up

You need 25 servings, but the recipe makes 6.

- Step 1: $25 \div 6 = 4.16$ (this is your factor)
- Step 2: Multiply each ingredient by 4.16
- Ex: 1 pound (lb) chicken $\times 4.16 = 4.16$ lbs

Helper Sheets Factor: How much should I prepare or purchase?

$$\frac{\text{\# of Servings Needed}}{\text{Helper Sheets Factor}} = \frac{\text{Amount of Purchased}}{\text{Units Needed}}$$

Example: 75 Servings of Applesauce, #10 can

$$\frac{75 - \frac{1}{2} \text{ c servings}}{23.8 - \frac{1}{2} \text{ c servings} / \#10 \text{ can (Helper Sheets Factor)}} = 3.1 \#10 \text{ cans needed (if a decimal, round up)} = 4 \#10 \text{ cans needed}$$

Helper Sheets Factor: How many servings do I have on hand?

$$\begin{array}{ccc} \text{\# Purchased Units} & & \text{Helper} \\ \text{On Hand} & \times & \text{Sheets} \\ & & \text{Factor} \end{array} = \begin{array}{c} \text{of Servings} \\ \text{On Hand} \end{array}$$

Example: 33 #10 Cans of Applesauce

$$33 \#10 \text{ cans of Applesauce} \times \frac{23.8 - \frac{1}{2} \text{ c servings} / \#10 \text{ can}}{\text{Helper Sheets Factor}} = \frac{785 - \frac{1}{2} \text{ c servings}}{\text{(always round down if a decimal)}}$$

Meal Components

Meat/Meat Alternate

*From the Texas Dept of Agriculture "Helper Sheets", updated 5/6/2026

USDA Food Buying Guide

MEAT/MEAT ALTERNATE ITEM	PURCHASE UNIT	SERVINGS PER PURCHASE UNIT		
		1 oz	1.5 oz	2 oz
Beans, Black, Dry, Canned, Heated, Drained	#10 Can	37	24.7	18.5
Beans, Black, Dry, Whole, Cooked	Pound	18.3	12.2	9.2
Beans, Black-Eyed, Dry, Canned, Heated, Drained	#10 Can	37.7	25.1	18.9
Beans, Black-Eyed, Dry, Whole, Cooked	Pound	28.3	18.9	14.2
Beans, Garbanzo, Dry, Canned, Heated, Drained	#10 Can	42	28	21
Beans, Garbanzo, Dry, Whole, Cooked	Pound	24.6	16.4	12.3
Beans, Great Northern, Dry, Canned, Heated, Drained	#10 Can	32.4	21.6	16.2
Beans, Great Northern, Dry, Whole, Cooked	Pound	25.5	17	12.7
Beans, Kidney, Dry, Canned, Heated, Drained	#10 Can	38.9	25.9	19.4
Beans, Kidney, Dry, Whole, Cooked	Pound	24.8	16.5	12.4
Beans, Pinto, Canned, Heated, Drained	#10 Can	37.2	24.8	18.6
Beans, Pinto, Dry, Cooked, Drained	Pound	21	14	10.5
Beans, Refried, Canned, Heated	#10 Can	49.6	33	24.8
Beans, Refried, Dehydrated, Cooked	Pound	20.5	13.6	10.2
Beef, Ground, Fresh or Frozen, 10% Fat, Cooked	Pound	12.1	8	6
Beef, Ground, Fresh or Frozen, 15% Fat, Cooked	Pound	12	8	6
Beef, Ground, Fresh or Frozen, 20% Fat, Cooked	Pound	11.8	7.8	5.9
Beef Stew Meat, Fresh or Frozen, Cooked	Pound	9.8	6.5	4.9
Cheese, American, Mozzarella, Cheddar	Pound	16	10.6	8
Cheese, Cottage or Ricotta (2 oz serving 1/4 c = 1 oz MMA)	Pound	8	5.3	4
Chicken, 8 piece, Frozen, Heated 1 breast piece, OR 1 drumstick & 1 wing, OR 1 thigh w/ back = 2 oz MMA	40 lb box			83
Chicken, Diced or Pulled, Cooked, Frozen	Pound	16	10.6	8
Eggs, Frozen, Whole Eggs, Pasteurized	Pound	18	12	9
Eggs, in Shell, Fresh, Large, Whole	Dozen	24	16	12
Peanut /Almond /Sunflower Butter (including Reduced Fat) (2 Tbsp = 1 oz MMA)	#10 Can	#30 SC 97.5	#20 SC 65	#16 SC 48.7

Meal Components

Meat/Meat Alternate

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USDA Food Buying Guide

MEAT/MEAT ALTERNATE ITEM	PURCHASE UNIT	SERVINGS PER PURCHASE UNIT		
		1 oz	1.5 oz	2 oz
Pork, Mild Cured, Ready to Cook, Chilled or Frozen, Ham w/o bone (1.2 oz Ham w/Water Added = 1 oz MMA) (1.8 oz Ham w/Water Added = 1.5 oz MMA) (2.44 oz Ham w/Water Added = 2 oz MMA)	Pound	10	6.6	5
Tuna, Water Packed, Canned, Chunk Style, Drained	12 oz. can	10.5	7	5.2
Tuna, Water Packed, Canned, Chunk Style, Drained	66 1/2 oz. can	51.2	34.1	25.6
Turkey, Boneless, Fresh or Frozen w/Skin	Pound	11.2	7.4	5.6
Turkey, Cooked, Frozen, Diced or Pulled, w/o Skin	Pound	16	10.6	8
Turkey Ham, Fully Cooked, Chilled or Frozen (1.4 oz = 1 oz MMA) (2.1 oz = 1.5 oz MMA) (2.8 oz = 2 oz MMA)	Pound	11.2	7.4	5.6
Turkey Ham, Fully Cooked, Chilled or Frozen (15% added ingredients) (1.7 oz = 1 oz MMA) (2.6 oz = 1.5 oz MMA) (3.4 oz = 2 oz MMA)	Pound	9.41	6.2	4.7
Turkey Roast, Frozen, w/o Bone, USDA Foods Only (w/o Skin)	Pound	10.5	7	5.2
Turkey, Whole, Fresh or Frozen, (w/o Neck & Giblets) (w/o Skin)	Pound	7.5	5	3.7
Turkey, Whole, Fresh or Frozen, (w/Neck & Giblets) (w/Skin)	Pound	7.6	5.1	3.8
Yogurt, Fresh or Soy, Plain or Flavored, Sweetened or Unsweetened, Commercially Prepared (1/2 cup or 4 oz = 1oz MMA) (3/4 cup or 6 oz = 1.5 oz MMA)	32 oz Container	8	5.3	4

Meal Components

Grains

*From the Texas Dept of Agriculture "Helper Sheets", updated 5/6/2026

USDA Food Buying Guide

GRAINS	PURCHASE UNIT	SERVINGS PER PURCHASE UNIT	
		1/4 CUP	1/2 CUP
Cereal Grain, Oats Rolled, Quick, Dry, Cooked	Pound	47.6	23.8
Cereal Grain, Oats Rolled, Regular, Dry, Cooked	Pound	45.4	22.7
Corn Chips	Pound	10	20
Pasta, Bowties, Whole Wheat, Regular, Dry, Cooked	Pound	28.5	14.25
Pasta, Elbow Macaroni, Whole Wheat, Regular, Dry, Cooked	Pound	32.5	16.2
Pasta, Penne, Whole Wheat, Dry, Cooked	Pound	34.5	17.2
Pasta, Shells, Whole Wheat, Dry, Cooked	Pound	30.5	15.25
Pasta, Spaghetti, Whole Wheat , Regular, Dry, Cooked	Pound	34	17
Rice, Brown, Instant, Dry, Cooked	Pound	28.8	14.4
Rice, Brown, Long Grain, Dry, Cooked	Pound	17.5	8.75
Rice, Brown, Long Grain, Dry, Parboiled, Cooked	Pound	31	15.5
Wild Rice, Dry, Cooked	Pound	34.8	17.4

Meal Components

Vegetable Subgroups

*From the Texas Dept of Agriculture "Helper Sheets", updated 5/6/2026

DARK GREEN	RED/ORANGE	BEANS, PEAS, & LENTILS
• Arugula • Beet greens • Bok choy • Broccoli • Broccoli rabe (rapini) • Broccolini • Butterhead lettuce (Boston, Bibb) • Chicory • Cilantro • Collard greens • Endive • Escarole • Fiddle heads • Grape leaves • Kale • Mesclun • Mustard greens • Parsley • Spinach • Swiss chard • Red leaf lettuce • Romaine lettuce • Turnip greens • Watercress	• Bell peppers (red, orange) • Carrots, orange • Cherry peppers • Orange peppers • Pimientos • Pumpkin • Red chili peppers • Red peppers • Salsa (100% vegetables) • Spaghetti squash • Sweet potatoes/yams • Tomatoes • Tomato juice • Winter squash (acorn, butternut, Hubbard)	• Black beans • Black-eyed peas (mature, dry) • Cowpeas • Edamame • Fava beans • Garbanzo beans (chickpeas) • Great Northern beans • Kidney beans • Lentils • Lima beans (mature, dry) • Mung beans • Navy beans • Pink Beans • Pinto beans • Red beans • Refried beans • Soy beans (mature, dry) • Split peas • White beans
STARCHY	OTHER	
• Black-eyed peas, fresh (not dry) • Corn • Cassava (yucca) • Cowpeas, fresh (not dry) • Field peas, fresh (not dry) • Green bananas • Green peas • Hominy, whole (canned, drained) • Jicama • Lima beans, green (not dry) • Parsnips • Pigeon peas, fresh (not dry) • Plantains • Potatoes • Poi • Taro (malanga) • Water chestnuts • Yautia (tannier)	• Artichokes • Asparagus • Avocado • Bamboo shoots • Bean sprouts, cooked only (for food safety) • Beans, green/yellow • Beets • Breadfruit • Brussel sprouts • Cabbage (green, red, napa) • Cactus (nopales) • Cauliflower • Carrots, rainbow • Celery • Chayote (mirliton) • Chives • Cucumbers • Daikon • Eggplant	• Garlic • Iceberg lettuce • Mixed greens lettuce • Mixed vegetables • Mushrooms • Okra • Olives • Onion • Pepperoncini • Peppers (green, sweet bell, green chilies, jalapeno, purple, yellow) • Pickles • Radishes • Sauerkraut • Snap/Snow peas • Spaghetti squash • Tomatillos • Zucchini

Meal Components

Vegetable Subgroups – Dark Green

*From the Texas Dept of Agriculture "Helper Sheets", updated 5/6/2026

USDA Food Buying Guide

DARK GREEN VEGETABLE SUBGROUP	PURCHASE UNIT	SERVINGS PER PURCHASE UNIT		
		1/4 CUP	1/2 CUP	1 CUP
Broccoli, Fresh, Florets, Cooked	Pound	11.5	5.75	2.9
Broccoli, Fresh, Florets, Trimmed, RTU	Pound	28.8	14.4	7.2
Broccoli, Fresh, Spears, Trimmed, RTU	Pound	17	8.5	4.25
Broccoli, Fresh, Spears, Trimmed, Cooked, Drained	Pound	13	6.5	3.25
Broccoli, Frozen, Chopped, Cooked, Drained	Pound	9.6	4.8	2.4
Collard Greens, Canned, Cooked, Drained	#10 Can	27.2	13.6	6.8
Kale, Fresh, Trimmed, With Stem, RTU	Pound	35.7	17.85	8.9
Lettuce, Dark Green Leafy, Untrimmed *	Pound	21.7	10.8	5.4
Lettuce, Romaine, Untrimmed *	Pound	31.3	15.6	7.8
Salad Mix, Romaine/Spinach, w/color, RTU *	Pound	36	18	Approx 9
Salad Mix, Romaine/Spinach, w/out color, RTU *	Pound	28	14	Approx 7
Spinach, Fresh, Leaves, RTU*	Pound	25.6	12.8	6.4
Spinach, Canned, Heated, Drained	#10 Can	25.2	12.6	3.2
Spinach, Frozen, Chopped, Cooked, Drained	Pound	5.6	2.8	1.4

*1 cup of fresh green leafy vegetables credits as ½cup in NSLP/SBP. EX: 1 cup fresh Romaine credits as ½ cup vegetable.

Meal Components

Vegetable Subgroups – Red/Orange

*From the Texas Dept of Agriculture "Helper Sheets", updated 5/6/2026

USDA Food Buying Guide

RED/ORANGE VEGETABLE SUBGROUP	PURCHASE UNIT	SERVINGS PER PURCHASE UNIT	
		1/4 CUP	1/2 CUP
Carrots, Fresh, Shredded, RTU	Pound	19.9	9.9
Carrots, Fresh, Sticks, RTU	Pound	15.4	7.7
Carrots, Baby, RTU	Pound	12.9	6.4
Carrots, Canned, Sliced, Cooked, Drained	#10 Can	37.2	18.6
Carrots, Frozen, Sliced, Cooked, Drained	Pound	11.16	5.58
Peppers, Bell, Fresh, Orange or Red, Medium or Large, Whole, Chopped or Diced	Pound	9.7	4.85
Peppers, Bell, Fresh, Orange or Red, Medium or Large, Whole, Strips	Pound	14.7	7.3
Peppers, Bell, Frozen, Orange or Red, Diced, Cooked, Drained	Pound	7.3	3.65
Pumpkin, Canned, Heated	#10 Can	51.5	25.7
Salsa, Canned, all vegetable ingredients plus a minor amount of spices	#10 Can	49.3	24.6
Squash, Acorn, Mashed, Cooked, Drained	Pound	4.7	2.3
Squash, Butternut, Cubed, Cooked, Drained	Pound	7.5	3.7
Squash, Hubbard, Cubed, Cooked, Drained	Pound	4.4	2.2
Sweet Potato, Fresh, Whole, Baked	Pound	6.6	3.3
Sweet Potatoes, Canned, Cut, Light Syrup, Heated, Drained	#10 Can	33.8	16.9
Sweet Potatoes, Canned, Mashed, Heated	#10 Can	49.1	24.5
Sweet Potato, Fries, Puff	Pound	10	5
Sweet Potato, Fries, Straight Cut	Pound	11.5	5.75
Tomato Products Canned, Tomato Paste	#10 Can	192	96
Tomato Products, Canned, Spaghetti Sauce, Meatless	#10 Can	47.9	23.95
Tomatoes, Fresh, Cherry, Whole	Pound	12.1	6.05
Tomatoes, Fresh, Small or Medium, Whole, Sliced	Pound	8.5	4.3
Tomatoes, Fresh, Diced, RTU	Pound	8.74	4.37
Tomatoes, Canned, Crushed, Heated, Vegetable & Juice	#10 Can	46.6	23.3
Tomatoes, Canned, Diced, Heated, Vegetable & Juice	#10 Can	49.2	24.6
Tomatoes, Canned, Whole or Stewed, Heated, Vegetable & Juice	#10 Can	45.5	22.7

Meal Components

Vegetable Subgroups

Beans, Peas, and Lentils

*From the Texas Dept of Agriculture "Helper Sheets", updated 5/6/2026

USDA Food Buying Guide

BEANS, PEAS, AND LENTILS VEGETABLE SUBGROUP	PURCHASE UNIT	SERVINGS PER PURCHASE UNIT	
		1/4 CUP	1/2 CUP
Beans, Baked in Sauce, Vegetarian, Heated	#10 Can	47.1	23.5
Beans, Baked, Sauce & Pork, Canned, Heated	#10 Can	48.9	24.4
Beans, Black, Dry, Canned, Heated, Drained	#10 Can	37	18.5
Beans, Black, Dry, Whole, Cooked	Pound	18.3	9.1
Beans, Black-eyed Peas, Canned, Heated, Drained	#10 Can	37.7	18.8
Beans, Black-eyed Peas, Canned, Unheated	#10 Can	46	23
Beans, Garbanzo or Chickpea, Dry, Canned, Heated, Drained	#10 Can	45.5	22.75
Beans, Kidney, Dry, Canned, Heated, Drained	#10 Can	38.9	19.45
Beans, Lima, Dry, Baby, Cooked	Pound	23.4	11.7
Beans, Pinto, Canned, Heated, Drained	#10 Can	37.2	18.6
Beans, Pinto, Dry, Cooked	Pound	21	10.5
Beans, Refried, Canned, Heated	#10 Can	49.6	24.8
Beans, Refried, Dehydrated, Cooked	Pound	20.5	10.2
Beans, Soy (Edamame), Fresh, Shelled, Cooked, Drained	Pound	10.7	5.35
Beans, Soy (Edamame), Canned, Shelled, Heated, Drained	Pound	7.3	3.65

Meal Components

Vegetable Subgroups - Starchy

*From the Texas Dept of Agriculture "Helper Sheets", updated 5/6/2026

USDA Food Buying Guide

STARCHY VEGETABLE SUBGROUP	PURCHASE UNIT	SERVINGS PER PURCHASE UNIT	
		1/4 CUP	1/2 CUP
Corn, Canned, Whole Kernel, Heated, Drained	#10 Can	39.6	19.8
Corn, Frozen, Whole Kernel, Cooked	Pound	11	5.5
Corn, Frozen, On the Cob, Cooked (3 inch Ear) 1 cobbette = ¼ cup Vegetable	Pound	4.2	2.1
Corn, Frozen, On the Cob, Cooked, (5¼ inch Ear) 1 medium cob = ½ cup Vegetable	Pound	4.88	2.44
Jicama, Fresh, Peeled, Strips	Pound	11.9	5.9
Peas, Black-eyed, Fresh, Shelled, Cooked, Drained	Pound	10.3	5.15
Peas, Green, Canned, Heated, Drained	#10 Can	36.7	18.3
Peas, Green, Frozen, Cooked, Drained	Pound	9.5	4.7
Potatoes, Frozen, Hash browns, Diced, Cooked	Pound	7.7	3.8
Potatoes, Frozen, Rounds, Baked	Pound	12.2	6.1
Potatoes, Russet, 100 Count, Whole, Baked w/ Skin	Pound	6.7	3.3
Potatoes, Diced, Canned, Drained, Unheated	#10 Can	39.9	19.9
Potatoes, Small Whole, Canned, Heated, Drained	#10 Can	43.7	21.8
Potatoes, Wedges, Frozen, Cooked	Pound	11.9	5.9
Potatoes, Diced, Frozen, Precooked, Cooked	Pound	8.9	4.4
Potatoes, Dehydrated, Granules, Reconstituted, Heated	Pound	50.5	25.2
Potatoes, French Fries, Frozen, Crinkle Cut, Cooked	Pound	12.6	6.3
Potatoes, French Fries, Frozen, Curly, Cooked	Pound	16.2	8.1
Potatoes, French Fries, Frozen, Straight-Cut, Cooked	Pound	14	7

Meal Components

Vegetable Subgroups - Other

*From the Texas Dept of Agriculture "Helper Sheets", updated 5/6/2026

USDA Food Buying Guide

OTHER VEGETABLE SUBGROUP	PURCHASE UNIT	SERVING PER PURCHASE UNIT	
		1/4 CUP	1/2 CUP
Beans, Green, Canned, Cut, Heated, Drained	#10 can	45.3	22.6
Beans, Green, Frozen, Cut, Cooked, Drained	Pound	11.6	5.8
Cabbage, Fresh, Green, Untrimmed, Raw, Chopped	Pound	17.7	8.8
Cabbage, Green, Shredded, RTU	Pound	27	13.5
Cabbage, Red, Shredded, RTU	Pound	22.8	11.4
California Blend, Frozen, Cooked, Drained (Broccoli, Carrots and Cauliflower)	Pound	10.6	5.3
Cauliflower, Fresh, Florets, RTU, Cooked, Drained	Pound	14.1	7.05
Celery, Fresh, Trimmed, Raw Vegetable Sticks	Pound	12.2	6.1
Celery, Fresh, Sticks, RTU	Pound	14	7
Cucumbers, Fresh, Whole, Unpeeled, Sliced	Pound	12.4	6.2
Cucumbers, Fresh, Whole, Unpeeled, Sticks	Pound	11.8	5.9
Lettuce, Fresh, Iceberg, Head, Untrimmed, Raw	Pound	13.9	6.95
Lettuce, Mixed Greens (Iceberg and Romaine w/Shredded Carrots & Red Cabbage)	Pound	25.7	12.8
Lettuce, Salad Mix (Iceberg, some Romaine, w/Shredded Carrot & Red Cabbage)	Pound	26.4	13.2
Mushrooms, Fresh, Whole, Raw, Sliced	Pound	18.7	9.3
Mushrooms, Fresh, Slices, RTU	Pound	18.5	9.2
Mushrooms, Canned, Drained	#10 Can	49.4	24.7
Okra, Fresh, Whole, Cooked, Drained, Sliced	Pound	9	4.5
Okra, Frozen, Cut, Cooked, Drained	Pound	9.1	4.5
Onions, Fresh, Whole, Raw, Chopped	Pound	9.3	4.6
Onions, Frozen, Chopped, Cooked	Pound	5.9	2.9
Peppers, Bell, Green or Yellow, Fresh, Diced	Pound	9.7	4.8
Squash, Summer, Fresh, Yellow, Cubed, Cooked, Drained	Pound	7.3	3.6
Squash, Summer, Fresh, Yellow, Sliced, Cooked, Drained	Pound	8.4	4.2
Squash, Summer, Frozen, Yellow, Sliced, Cooked, Drained	Pound	7.9	3.9
Squash, Summer, Fresh, Zucchini, Cubed, Cooked, Drained	Pound	7.6	3.8
Squash, Summer, Fresh, Zucchini, Sliced, Cooked, Drained	Pound	10.2	5.1
Squash, Summer, Frozen, Zucchini, Sliced, Drained	Pound	7	3.5

Meal Components

Fruit

*From the Texas Dept of Agriculture "Helper Sheets", updated 5/6/2026

USDA Food Buying Guide

FRUIT	PURCHASE UNIT	SERVINGS PER PURCHASE UNIT	
		1/4 CUP	1/2 CUP
Apples, Fresh, Small, Unpeeled, 125-138 Count/Case (1/4 apple = 1/4 cup Fruit)	Pound	14.8	7.4
Apples, Fresh, Unpeeled, Cored, Sliced	Pound	14.6	7.3
Apples, Canned, Sliced, Drained	#10 Can	47.5	23.7
Applesauce, Canned	#10 Can	47.6	23.8
Apricots, Canned, Diced, Fruit & Juice	#10 Can	48	24
Apricots, Canned, Halves, Unpeeled, Drained	#10 Can	29.3	14.7
Apricots, Canned, Slices, Peeled, Fruit & Juice	#10 Can	45.7	22.9
Bananas, Fresh, Regular, 100-120 Count, Sliced	Pound	7	3.5
Bananas, Fresh, Regular, Unpeeled, 100-120 Count	Pound	5.3	2.6
Blackberries, Fresh, Whole	Pound	11.9	5.9
Blueberries, Fresh, Whole	Pound	11.9	5.9
Blueberries, Frozen, Unsweetened, Whole, Cooked with Added Sugar	Pound	7.8	3.9
Blueberries, Frozen, Unsweetened, Whole, Thawed	Pound	11.9	5.9
Cantaloupe, Whole, 15 Count, Cubed	Pound	6.7	3.3
Cantaloupe, Whole, 18 Count, Cubed	Pound	5.7	2.8
Cherries, Red Tart, Canned, Drained	#10 Can	36.2	18.1
Clementines, Fresh, Whole, Peeled	Pound	12	6
Cranberry Relish or Sauce, Canned	#10 Can	48	24
Fruit, Mixed, Canned, Fruit Cocktail, Fruit & Liquid	#10 Can	46.9	23.5
Grapefruit, Fresh, Whole, Peeled	Pound	6.4	3.2
Grapes, Fresh, Seedless, Whole, w/o Stem	Pound	11.6	5.8
Grapes, Fresh, Seedless, Whole, w/Stem	Pound	10.5	5.2
Honeydew Melon, Fresh, Whole, Cubed	Pound	4.9	2.4
Kiwi, Fresh, Whole, Unpeeled Halves, 33-39 Count	Pound	10.8	5.4
Lemons, Fresh, Whole	Pound	3.1	1.55
Limes, Fresh, Whole	Pound	3.5	1.75
Mangoes, Frozen, Unsweetened, Diced	Pound	7.5	3.8

Meal Components

Fruit

*From the Texas Dept of Agriculture "Helper Sheets", updated 5/6/2026

USDA Food Buying Guide

FRUIT	PURCHASE UNIT	SERVINGS PER PURCHASE UNIT	
		1/4 CUP	1/2 CUP
Orange, Fresh, 125 Count, Unpeeled	Pound	5.8	2.9
Oranges, Mandarin, Canned, Drained	#10 Can	30.2	15.1
Peach, Fresh, Small, Whole	Pound	8.2	4.1
Peach, Fresh, Medium, Whole	Pound	7	3.5
Peaches, Canned, Diced, Drained	#10 Can	35.4	17.7
Peaches, Canned, Diced, Fruit & Juice	#10 Can	48.6	24.3
Peaches, Canned, Sliced, Drained	#10 Can	36.1	18
Peaches, Canned, Sliced, Fruit & Juice	#10 Can	50	25
Peaches, Frozen, Sliced, Sweetened or Unsweetened, Thawed, Fruit & Juice	Pound	7.34	3.6
Pears, Fresh, All Sizes, Whole,	Pound	7.9	3.9
Pears, Canned, Diced, Drained	#10 Can	38	19
Pears, Canned, Diced, Fruit & Liquid	#10 Can	47.6	23.8
Pears, Canned, Halves, Drained	#10 Can	31	15.5
Pears, Canned, Halves, Fruit & Liquid	#10 Can	52	26
Pears, Canned, Sliced, Drained	#10 Can	29.5	14.7
Pears, Canned, Sliced, Fruit & Liquid	#10 Can	49.7	24.8
Pineapple, Canned, Chunks, Drained	#10 Can	31.8	15.9
Pineapple, Canned, Chunks, Fruit & Liquid	#10 Can	49.9	24.9
Pineapple, Canned, Slices, Drained	#10 Can	37.7	18.8
Pineapple, Canned, Slices, Fruit & Juice (approx 60 slices)	#10 Can	47.5	23.7
Pineapple, Canned, Tidbits, Drained	#10 Can	33.4	16.7
Pineapple, Canned, Tidbits, Fruit & Juice	#10 Can	50.1	25
Plums, Fresh, Whole	Pound	9.8	4.9
Raisins, Seedless, (¼ cup Serving = ½ cup Fruit)	Pound	12.6	6.3
Strawberries, Fresh, Whole,	Pound	10.5	5.2
Strawberries, Frozen, Sliced, Unsweetened, Thawed, Fruit & Liquid	Pound	7.2	3.6
Tangerines, Fresh, Whole, Peeled	Pound	7.8	3.9
Watermelon, Fresh, Whole, Diced, w/o Rind	Pound	6.1	3

SY 2026-2027 Meal Pattern Chart

National School Breakfast Program

*From the Texas Dept of Agriculture "Helper Sheets", updated 5/6/2026

Minimum Amount of Each Food Component Per Week (Minimum Offering Per Day)

Pre-Kindergarten (Pre-K) Daily			School Age Daily and Weekly				
Meal Pattern Components	Age 1-2	Age 3-5	Meal Pattern Components	Grades K-5	Grades 6-8	Grades 9-12	Grades K-12
Milk , Unflavored: Age 1, Whole Age 2-5, low-fat or fat-free	½ Cup	¾ Cup	4Milk Unflavored/flavored ⁵ 1% low fat or fat free	5 (1) cups	5 (1) cups	5 (1) cups	5 (1) cups
Fruits and Vegetables	¼ Cup	½ Cup	6Fruits and Vegetables	5 (1) cups	5 (1) cups	5 (1) cups	5 (1) cups
1,2Grains: Whole Grain-Rich or Enriched			7Grains* 80 % WG-Rich	7 – 10 (1 oz eq)	8 – 10 (1 oz eq)	9 – 10 (1 oz eq)	9 – 10 (1 oz eq)
Bread Product: (e.g., biscuit, roll, muffin)	0.5 oz eq		Nutrient Specifications: Daily Amount Based on Average 5- Day Week				
Cooked: Cereal, Cereal Grain, Pasta	0.5 oz eq		Min.–Max. Calories (kcal)	350–500	400–550	450–600	450–500
3Ready-to-Eat Breakfast Cereal, Dry or Cold: Flakes or Rounds Puffed Cereal Granola	½ Cup ¾ Cup ⅞ Cup		Saturated Fat % of total calories	< 10	< 10	< 10	< 10
			Sodium Target (mg)	≤ 540	≤ 600	≤ 640	≤ 540
			Trans Fat	Product nutrition label/manufacturer specification must indicate 0 grams of <u>trans</u> fat per serving.			

¹CACFP: grain-based desserts are not creditable toward the grains component

²CACFP: one whole-grain rich food item must be served each day across all meals

³CACFP: Beginning October 1, 2025, breakfast cereals may have no more than 6 grams of added sugar per dry ounce.

⁴One choice of milk must be unflavored at each meal service.

⁵Beginning July 1, 2025, flavored milk must contain no more than 10 grams of added sugars per 8 fluid ounces, or for flavored milk sold à la carte in middle and high schools, 15 grams of added sugars per 12 fluid ounces.

⁶Beginning July 1, 2025, vegetables from at least two different vegetable subgroups must be offered when substituting vegetables for fruits at breakfast on two or more days per school week.

⁷At least 80% of weekly grains offered must be whole grain rich.

+ A Meat/Meat Alternate may be offered as a substitute for grain.

For detailed guidance on regulatory requirements see TDA's Administrative Reference Manual Sections 7, 8, and 9.

SY 2026-2027 Meal Pattern Chart

National School Lunch Program

*From the Texas Dept of Agriculture "Helper Sheets", updated 5/6/2026

Minimum Amount of Each Food Component Per Week (Minimum Offering Per Day)

Pre-Kindergarten (Pre-K) Daily		
Meal Pattern Components	Age 1-2	Age 3-5
Milk: Unflavored Age 1, whole milk Age 2-5, 1 percent low fat or fat free unflavored	½ cup	¾ cup
Fruits	½ cup	¼ cup
Vegetables	½ cup	¼ cup
^{1,2} Grains: Whole Grain-Rich or Enriched		
Bread product {e.g., biscuit, roll, or muffin)	0.5 oz eq	0.5 oz eq
Pasta	0.5 oz eq	
Meat/Meat Alternates		
Lean meat, poultry, or fish	1 oz	1.5 oz
Tofu, soy product, or alternate protein products	1.0 oz	1.5 oz
Cheese	1 oz	1.5 oz
Large egg	½ egg	¾ egg
Bean, peas, and lentils	0.5 oz eq	0.75 oz eq
Peanut butter, soy nut butter, or other nut or seed butter	2 Tbsp	3 Tbsp
³ Yogurt, plain or flavored, unsweetened or sweetened	4 oz	6 oz
Peanuts, soy nuts, tree nuts, or seeds	0.5 oz	0.75 oz

School Age Daily and Weekly				
Meal Pattern Components	Grades K-5	Grades 6-8	Grades K-8	Grades 9-12
⁴ Milk Fluid milk: approved unflavored or flavored options ^{5, 6}	5 (1) cups	5 (1) cups	5 (1) cups	5 (1) cups
Fruits	2½ (½) cups	2½ (½) cups	2½ (½) cups	5 (1) cups
Vegetables	3¾ (¾) cups	3¾ (¾) cups	3¾ (¾) cups	5 (1) cups
Dark Greens	½ cup	½ cup	½ cup	½ cup
Red/Orange	¾ cup	¾ cup	¾ cup	1¼ cups
Beans, Peas, and Lentils	½ cup	½ cup	½ cup	½ cup
Starchy	½ cup	½ cup	½ cup	½ cup
Other	½ cup	½ cup	½ cup	¾ cup
Additional Vegetable	1 cup	1 cup	1 cup	1½ cups
⁷ Grains 80 % Whole Grain-Rich	8 – 9 (1 oz eq)	8 – 10 (1 oz eq)	8 – 9 (1 oz eq)	10 – 12 (2 oz eq)
Meat/Meat Alternates	8 – 10 (1 oz eq)	9 – 10 (1 oz eq)	9 – 10 (1 oz eq)	10 – 12 (2 oz eq)
Nutrient Specifications: Daily Amount Based on Average 5-Day Week				
Min.-Max. Calories{kcal}	550-650	600-700	600-650	750-850
Saturated Fat % of total calories	< 10	< 10	< 10	< 10
Sodium Target {mg}	≤ 1,110	≤ 1,225	≤ 1,110	≤ 1,280
<u>Trans Fat</u>	Product nutrition label/manufacturer specification must indicate 0 grams of <u>trans</u> fat per serving.			

¹CACFP: grain-based desserts are not creditable toward the grains component

²CACFP: one whole-grain rich food item must be served each day across all meals

³CACFP: Beginning October 1, 2025, yogurt may have no more than 12 grams of added sugars per 6 ounces.

⁴One choice of milk must be unflavored at each meal service

⁵Beginning July 1, 2025, flavored milk must contain no more than 10 grams of added sugars per 8 fluid ounces, or for flavored milk sold à la carte in middle and high schools, 15 grams of added sugars per 12 fluid ounces.

⁶Fat-free (skim), low-fat (1%), reduced-fat (2%), or whole milk; lactose-free fluid milk; nondairy beverages meeting FDA nutritional standards. The Whole Milk for Healthy Kids Act of 2025 allows reduced-fat (2%) and whole milk to be served for reimbursable lunches claimed under NSLP.

⁷At least 80% of weekly grains offered must be whole grain rich with the remaining enriched

For detailed guidance on regulatory requirements see TDA's Administrative Reference Manual Sections 7, 8, and 9.

Basics at a Glance

Recipe Abbreviations

approx.	= approximate
tsp or t	= teaspoon
Tbsp or T	= tablespoon
c	= cup
pt	= pint
qt	= quart
gal	= gallon
wt	= weight
oz	= ounce
lb or #	= pound (e.g., 3#)
g	= gram
kg	= kilogram
vol	= volume
mL	= milliliter
L	= liter
fl oz	= fluid ounce
No. or #	= number (e.g., #3)
in. or "	= inches (e.g., 12")
°F	= degree Fahrenheit
°C	= degree Celsius or centigrade

Volume Equivalents for Liquids



60 drops	= 1 tsp	
1 Tbsp	= 3 tsp	= 0.5 fl oz
1/8 cup	= 2 Tbsp	= 1 fl oz
1/4 cup	= 4 Tbsp	= 2 fl oz
1/3 cup	= 5 Tbsp + 1 tsp	= 2.65 fl oz
3/8 cup	= 6 Tbsp	= 3 fl oz
1/2 cup	= 8 Tbsp	= 4 fl oz
5/8 cup	= 10 Tbsp	= 5 fl oz
2/3 cup	= 10 Tbsp + 2 tsp	= 5.3 fl oz
3/4 cup	= 12 Tbsp	= 6 fl oz
7/8 cup	= 14 Tbsp	= 7 fl oz
1 cup	= 16 Tbsp	= 8 fl oz
1/2 pint	= 1 cup	= 8 fl oz
1 pint	= 2 cups	= 16 fl oz
1 quart	= 2 pt	= 32 fl oz
1 gallon	= 4 qt	= 128 fl oz

Equivalent Weights



16 oz	= 1 lb	= 1.000 lb
12 oz	= 3/4 lb	= 0.750 lb
8 oz	= 1/2 lb	= 0.500 lb
4 oz	= 1/4 lb	= 0.250 lb
1 oz	= 1/16 lb	= 0.063 lb

Scoops (Dishers)



Size/No. ¹	Level Measure	Color Code ²
6	2/3 cup	
8	1/2 cup	
10	3/8 cup	
12	1/3 cup	
16	1/4 cup	
20	3-1/3 Tbsp	
24	2-2/3 Tbsp	
30	2 Tbsp	
40	1-2/3 Tbsp	
50	3-3/4 tsp	
60	3-1/4 tsp	
70	2-3/4 tsp	
100	2 tsp	

¹ Scoops are left or right hand or squeeze-type that can be used for both hands. Number on the scoop indicates how many level scoopfuls make one quart. For example, eight No. 8 scoops = 1 quart.



² Use colored dots matching the brand-specific color coding of scoop sizes.

Ladles Portion Servers



Ladle fl oz	Approx. Measure	Portion Server fl oz
1 oz	1/8 cup	1 oz
2 oz	1/4 cup	2 oz
3 oz	3/8 cup	3 oz
4 oz	1/2 cup	4 oz
6 oz	3/4 cup	6 oz
8 oz	1 cup	8 oz
12 oz	1-1/2 cups	—

Ladles and portion servers (measuring-serving spoons that are volume-standardized) are labeled "oz." "Fl oz" would be more accurate since they measure volume, not weight.

Use ladles for serving soups, stews, creamed dishes, sauces, gravies, and other liquid products.

Use portion servers (solid or perforated) for portioning solids and semi-solids such as fruits and vegetables, and condiments.

Cooking or Serving Spoons



Solid Spoons



Perforated Spoons



Slotted Spoons

Spoons vary in length (11", 13", 15", 18", 21") for ease of use in cooking or serving. Spoons can have plastic handles that are heat-resistant. Level scoops, ladles, and portion servers provide more accurate portion control than serving spoons that are not volume-standardized measure.

Specialty Spoons

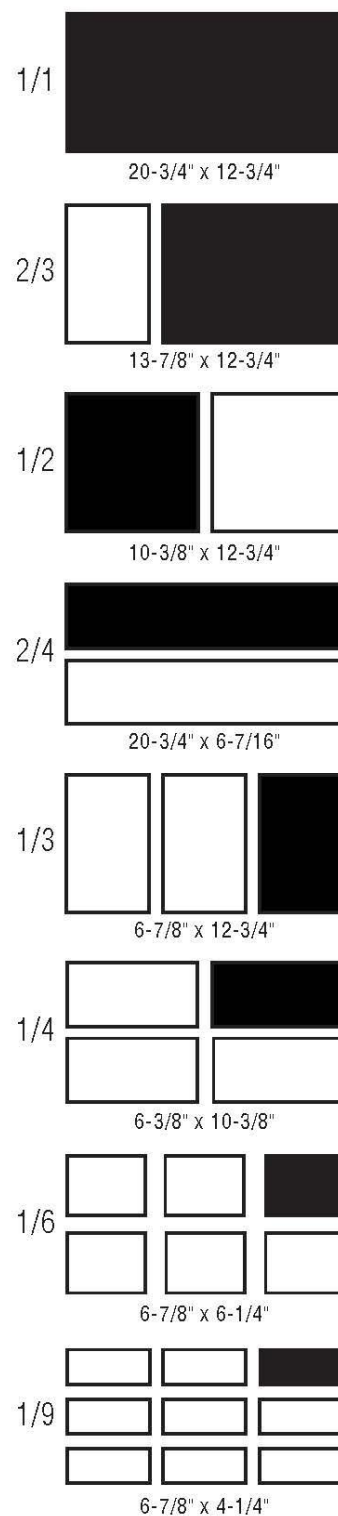


A thumb notch on a server or spoon handle prevents the spoon from slipping into the pan and prevents hands from sliding into the food. Triple-edge (solid or perforated) spoons have a flat edge that increases the area where the spoon touches the bottom of the pan when stirring.

Steamtable Pan Capacity

Pan Size	Approx. Capacity	Serving Size	Ladle (fl oz)	Scoop #	Approx. # Servings
12" x 20" x 2-1/2" 	2 gal	1/2 cup 3/8 cup 1/3 cup 1/4 cup	4 oz 3 oz 2.65 oz 2 oz	8 10 12 16	64 80 96 128
12" x 20" x 4" 	3-1/2 gal	1/2 cup 3/8 cup 1/3 cup 1/4 cup	4 oz 3 oz 2.65 oz 2 oz	8 10 12 16	112 135 168 224
12" x 20" x 6" 	5 gal	1/2 cup 3/8 cup 1/3 cup 1/4 cup	4 oz 3 oz 2.65 oz 2 oz	8 10 12 16	160 200 240 320

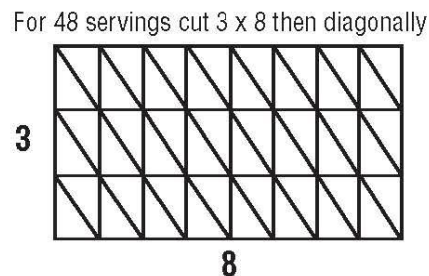
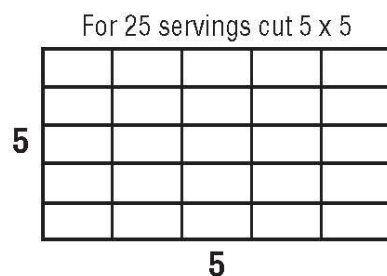
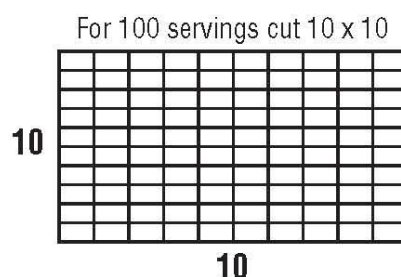
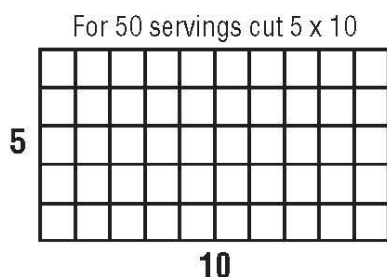
Other Pan Sizes



Approximate Dimensions of Serving Sizes from Different Pan Sizes

Pan	Approx. Size	No. and Approx. Size Servings per Pan		
		25	50	100
Baking or steamtable	12" x 20" x 2-1/2"	2" x 3-3/4"	2" x 2"	-----
Sheet or bun	18" x 26" x 1"	3-1/4" x 5"	3-1/4" x 2-1/2"	1-3/4" x 2-1/2"

Cutting Diagrams for Portioning



Steamtable or counter pans are available in various sizes. Smaller size pans may require the use of an adapter bar.

Fraction to Decimal Equivalents



1/8	= 0.125
1/4	= 0.250
1/3	= 0.333
3/8	= 0.375
1/2	= 0.500
5/8	= 0.625
2/3	= 0.666
3/4	= 0.750
7/8	= 0.875

Metric Equivalents by Weight



Customary Unit (avoirdupois)	Metric Unit
Ounces (oz)	Grams (g)
1 oz	= 28.35 g
4 oz	= 113.4 g
8 oz	= 226.8 g
16 oz	= 453.6 g
Pounds (lb)	Grams (g)
1 lb	= 453.6 g
2 lb	= 907.2 g
Pounds (lb)	Kilograms (kg)
2.2 lb	= 1 kg (1000 g)



Metric Equivalents by Volume



Customary Unit (fl oz)	Metric Unit
1 cup (8 fl oz)	= 236.59 mL
1 quart (32 fl oz)	= 946.36 mL
1.5 quarts (48 fl oz)	= 1.42 L
33.818 fl oz	= 1.0 L