

PBJ recipe

1 tbsp Pb
1 tbsp J
2 slices bread

SERVES 1

YOUR AMOUNT
INGREDIENT ↓

$$30 \text{ people} \times \frac{1 \text{ tbsp Pb}}{1 \text{ person}} \times \frac{1 \text{ Jar}}{26 \text{ tbsp}} \times \frac{\$5.49}{1 \text{ Jar}} = \$6.33$$

ALWAYS START WITH 30

YOUR RECIPE SERVING SIZE ↑

30 people → tbsp → jar → \$ cost

COOKIE RECIPE

SERVES 12
2 eggs
1 cup flour etc.
1 cup sugar

$$30 \text{ people} \times \frac{2 \text{ eggs}}{12 \text{ people}} \times \frac{1 \text{ carton}}{12 \text{ eggs}} \times \frac{\$1.00}{1 \text{ carton}} = \$0.42$$

30 people → eggs → carton → \$ cost

$$30 \text{ people} \times \frac{.5 \text{ cup sugar}}{12 \text{ people}} \times \frac{7.1 \text{ oz}}{1 \text{ cup sugar}} \times \frac{1 \text{ lb}}{16 \text{ oz}} \times \frac{\$3.00}{4 \text{ lb}} \times \frac{1 \text{ bag}}{1 \text{ bag}} = \$0.42$$

30 people → cup sugar → pounds → bag → cost

1 cup volume = 8 fluid ounces (fl. oz)

1 pound (lbs) = 16 oz

1 tablespoon = 2 fl. oz
(tbsp)

SOME RATIOS MUST BE REASONABLE
MADE UP

7.1 oz
1 cup sugar

5.0 oz
1 cup M&M

MADE UP
RATIOS
OR
CONVERSION
FACTORS

3 more examples

~~SOMETIMES~~ STUDENTS USED THE NUTRITION LABEL

for CONVERSION

$$30 \text{ people} \times \frac{1 \text{ meat patty}}{1 \text{ person}} \times \frac{1 \text{ package}}{10 \text{ meat patties}} = \frac{\$10.39}{1 \text{ package}} = \$31.17$$

$$30 \text{ people} \times \frac{2 \text{ slices bread}}{1 \text{ person}} \times \frac{1 \text{ loaf}}{22 \text{ slices bread}} = \frac{\$2.37}{1 \text{ loaf}} = \$6.46$$

$$30 \text{ people} \times \frac{1 \text{ tsp butter}}{1 \text{ person}} \times \frac{1 \text{ tablespoon}}{3 \text{ tsp}} \times \frac{14g}{1 \text{ tbsp}} \times \frac{1 \text{ tub}}{423g} = \frac{\$3.96}{1 \text{ tub}}$$

$$= \$1.30$$

RECIPE

1 tbsp Pb 2 slices bread > serves
1 tbsp J 1 person

Peanut Butter & Jelly

CALCULATE THE EXACT AMOUNT FOR 30 SERVINGS

HOW MUCH IS NEEDED?

30 people x $\frac{1 \text{ tbsp Pb}}{1 \text{ person}}$ = 30 tbsp Pb

Your serving size

30 people x $\frac{1 \text{ tbsp J}}{1 \text{ person}}$ = 30 tbsp J

Your serving size

THEN MAKE UP VALUES, ONE TOO MUCH, ONE ~~TO~~ NOT ENOUGH
(MAKE UP VALUES) Theoretical Yields

Scenario

EXCESS

40 tbsp Pb x $\frac{1 \text{ sandwich}}{1 \text{ tbsp Pb}}$ = 40 sandwich

40 tbsp Pb ~~scenario~~
25 tbsp J \downarrow LIMITING

25 tbsp J x $\frac{1 \text{ sandwich}}{1 \text{ tbsp J}}$ = 25 sandwich

CONVERT LIMITING TO EXCESS TO CALCULATE HOW MUCH USED

25 tbsp J x $\frac{1 \text{ tbsp Pb}}{1 \text{ tbsp J}}$ = 25 tbsp Pb used

CALCULATE LEFT OVER

AVAILABLE - USED = LEFT OVER

40 - 25 = 15 tbsp left over

