



DOCTRIVA LEARNING

# Making Salsa: Proportional Reasoning Activity

## Teacher Guide

### Introduction:

Making Salsa is an activity that covers proportional reasoning standards from 6th to 8th grade using a low floor, high ceiling methodology to be usable by students at multiple levels. It is designed to be self-contained on 2 pages (4 sides) and be doable in a 50-minute period. The Making Salsa - Student document can be printed (double-sided) or uploaded to a learning management system.

### Standards:

This activity covers the following core competencies found in CCSS, TEKS (Texas), and most state frameworks:

6th Grade: Scaling ratios, unit rates, and real-world price comparisons. (CCSS 6.RP.A.3; TEKS 6.4B)	7th Grade: Constant of proportionality and representing relationships. (CCSS 7.RP.A.2; TEKS 7.4A)	8th Grade: Graphing linear relationships and slope. (CCSS 8.EE.B.5; TEKS 8.4B)
---	---	--

### Sub Guide & Specific Instructions

The Making Salsa-Substitute file has a double-sided guide (two pages) for leading the activity and a double-sided report form (two pages) for feedback. If you have the chance, review this so you can give any specific instructions for your particular classes. If you don't or can't, the sub will have a general guide to help him or her make it through the period. If you have more specific instructions for the substitute, please send them. Some possible notes include:

- Will the activity be done on paper, online, or a combination of both?
- Are calculators allowed, forbidden, or usable under specific circumstances? Explain them.
- Should students work individually, in groups, or a combination under certain parameters?
- There are some leveling options in the activities. Do you want to restrict any of those options?
- Are there other resources (scratch paper, graph paper) available?
- Should the sub use a report form different from the one that is included?
- Are there helpful students in each class or a helpful teacher nearby?

## Activity Overview:

In Part 1, students are given a recipe for salsa and asked to scale it. They are given a choice of  $\times 2$ ,  $\times 3$ , and  $\times 2.5$ . There is a fraction bar image to scaffold fractional values. In Part 2 they must purchase their ingredients while balancing low price with minimizing waste. There are three choices for Part 3 moving from lower to higher skills and thinking.

## Assessing and Grading the Work

Part 4 is the evaluation on the back page. There is a self-evaluation on their effort, perceived accuracy, and challenge-level followed by a writing prompt for the student to describe the math they did during the activity, any patterns that they noticed, while using proportional reasoning vocabulary. Depending on your needs, you may use the following holistic rubric (or your own) to grade only the Part 4: Evaluation page. The rubric includes values from 1-4 translated into grades on the 100-point scale. You may choose to include the students' chosen challenge-level and use of proportional reasoning vocabulary as you see fit.

4	Evaluation is excellent showing deep understanding.	100
3.5	Evaluation is excellent showing a thorough understanding.	95
3	Evaluation is good showing a thorough understanding.	90
2.5	Evaluation is good showing a solid understanding.	85
2	Evaluation is sufficient showing a solid understanding.	80
1.5	Evaluation is mostly sufficient showing a basic understanding.	75
1	Evaluation is mostly sufficient showing some beginning signs of understanding.	70
0.5	Evaluation practically non-existent.	65
0	Evaluation is not done.	0

Use your judgment about what constitutes “sufficient”, “good”, “excellent” and “basic” for evaluation quality and “solid”, “thorough” and “deep” for understanding. If unsure, consider ordering papers from best to worst to help inform your criteria. The goal is to encourage and recognize high achievement while also encouraging students who are developing their understandings. Confirm that the grades you give for this activity are consistent with your school, district, network, or system policies.

## Key for Calculations

### Part 1

Ingredient	Original	x2	x3	X2.5
Tomatoes	3	6	9	7
Onions	1	2	3	2½
Bell Peppers	½	1	1½	1¼
Cilantro	¼	½	¾	5/8
Lime Juice	6	12	18	15
Jalapeño	4	8	12	10
Cumin	¾	1½	2¼	1 7/8
Salt	½	1	1½	1¼

### Part 2

x2

Ingredient	Selections	Cost	Waste
Tomatoes	1S, 1M	\$6.25	0 c
Onions	2S	\$2.00	½ c
Peppers	1M	\$1.25	0 c
Cilantro	1 M	\$1.00	0 c

x3

Ingredient	Selections	Cost	Waste
Tomatoes	1L	\$9.00	1 c
Onions	1M	\$2.50	1 c
Peppers	1S, 1M	\$2.05	0 c
Cilantro	1S, 1M	\$1.60	0 c

X2.5

Ingredient	Selections	Cost	Waste
Tomatoes	2M	\$8.00	½ c
Onions	1M	\$2.50	1 ½ c
Peppers	1S, 1M	\$2.05	¼ cup
Cilantro	1S, 1M	\$1.60	1/8 c

### Part 3

**Option 1:** 5 batches of salsa; 15 cups of tomatos

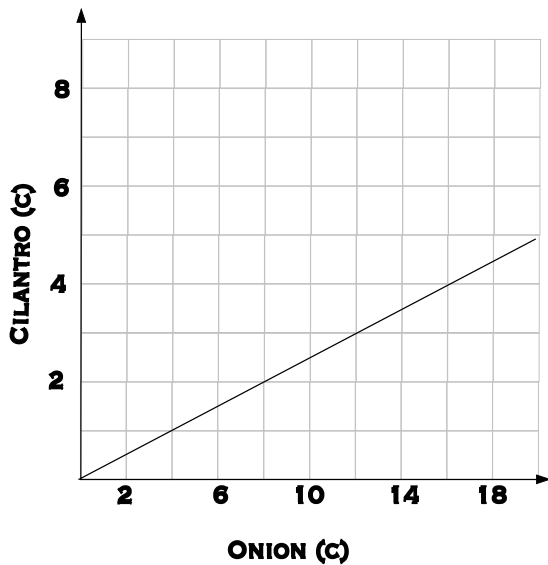
**Option 2:** cups\*48/1.5 = number of chips

x2 – 256 chips, 3 bags

x4 – 385 chips, 4 bags

x2.5 – 320 chips, 4 bags.

**Option 3:**  $y = \frac{1}{4}x$ ; Graph should start at (0,0) and include point (20,5)



For more information about the principles used in making this activity, go to [doctrivalearning.com](http://doctrivalearning.com)