



Girl Scout Cookie Sales

M2C3 Project (2018)



What do you notice? What do you wonder?



What do you notice?

What do you wonder?



What do you notice? What do you wonder?

AMERICA'S FAVORITE GIRL SCOUT COOKIES BY STATE



Top selling Girl Scout cookies nationally:

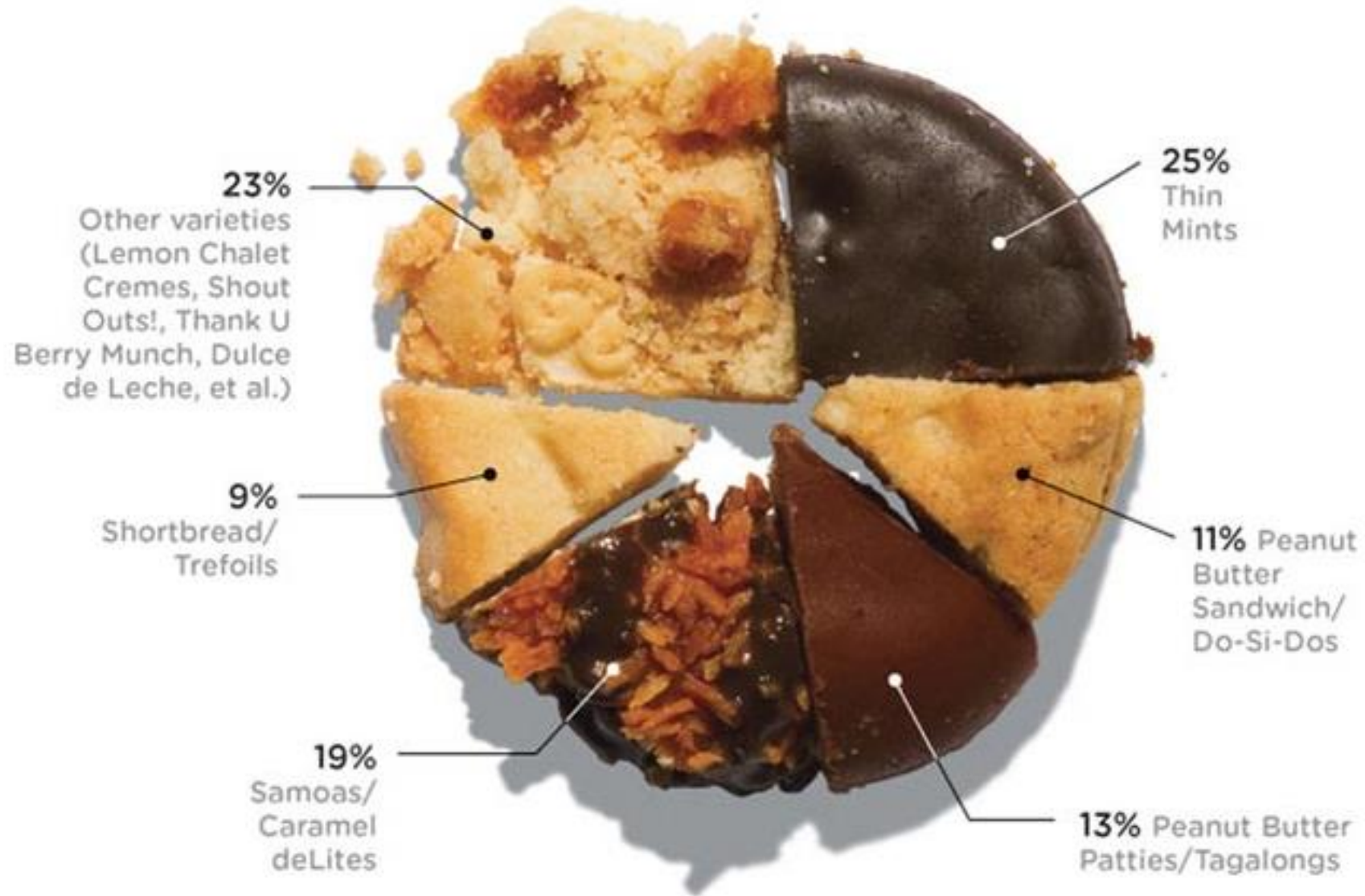


Top selling Girl Scout cookies by region:



SOURCE: Girl Scouts of the USA.

What do you notice? What do you wonder?



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HOW MANY BOXES TO BRING TASK: How many boxes of each cookie should the girl scouts bring to sell outside the grocery store?

---Should they bring the same number of boxes of each kind of cookie?

----Should they bring more of some cookies and less of other cookies?

--- How many boxes should they bring total?

- What do you know that could help you figure this out?
- What do you need to know?



HOW MANY BOXES? Warm Up Claim Task 1

- Based on the data she reviewed, the Girl Scout leader thinks that **one-half ($1/2$)** of the boxes that they bring to the sale should be **Thin Mints**.
- Do you agree? If so, why? If not, why not?
- If you don't agree, what fraction of the boxes should be **Thin Mints**?
- Use fractions to justify your reasoning.



HOW MANY BOXES? Warm Up Task 2

- The Girl Scout leader is trying to estimate how many cookie boxes the Girl Scouts will sell during the 3 hour sale outside of Walmart.
- Which of these **assumptions seem reasonable**? Which are unreasonable?
- A) It will take about 15 minutes to sell one box of cookies
- B) Some customers will buy one box of cookies, other customers will buy two or three boxes of cookies
- C) In a 15 minute period, the Girl Scouts will probably sell 60 boxes of cookies.
- D) In a 15 minute period, the Girl Scouts will probably have 2 to 4 different customers.

HOW MANY BOXES?: SPECIFIC SCENARIO

- The Girl Scout Troop is going to sell cookies outside Walmart for 3 hours this Saturday.
- How many **total boxes** should they bring?
- How many **boxes of each kind of cookie** should they bring?
- What **portion of the total** number of boxes should be Thin Mints, Samoas, Do-si-Dos, etc.. (use *fractions and/or percents*)
- Explain how you used the data to support your decisions.
- Explain any assumptions that you made.

- *Adaptation*: The Girl Leader says she can bring no more than 200 boxes to the sale. Will this be enough? Adjust your model.

HOW MANY BOXES?: GENERALIZING YOUR PLAN

Come up with a plan that any Girl Scout Troop in your town can use for a grocery store sale of any size.

Use fractions to tell the Girl Scout leader what portion of the total number of boxes should be each kind of cookie. Justify your recommendations and give examples.

Data Option 1a:

Girl Scout Cookie Sales Last Year at Grocery Store

Cookie	Number of Boxes (100 total)
Thin Mints	25
Samoas	20
Tagalongs (PB Patties)	15
Smores	15
Do-si-dos (PB Sandwich)	10
All Others	15

Data Option 1b:

Girl Scout Cookie Sales Last Year at Grocery Store

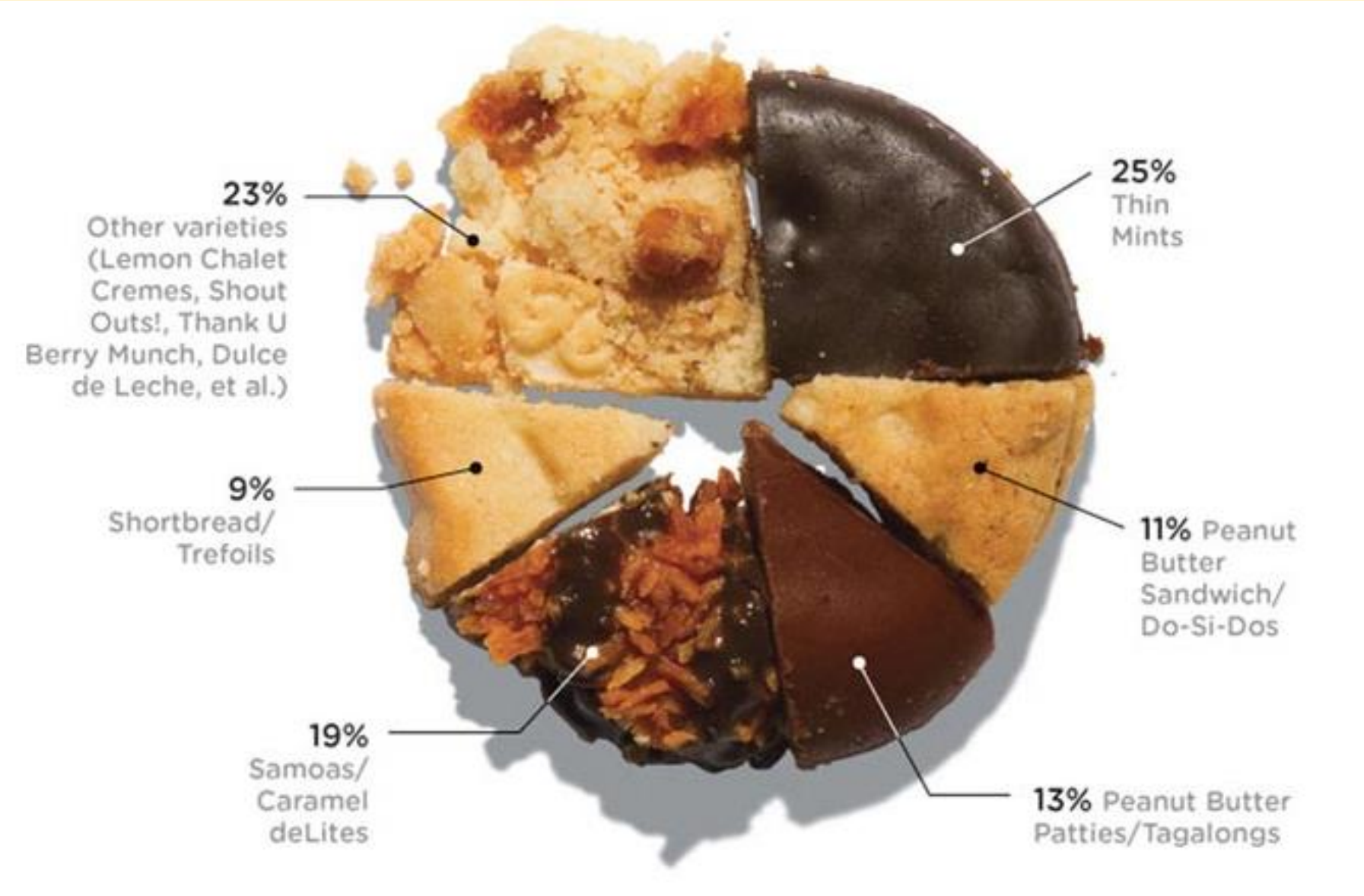
Cookie	Number of Boxes (50 total)
Thin Mints	13
Samoas	10
Tagalongs (PB Patties)	8
Smores	7
Do-si-dos (PB Sandwich)	5
All Others	7

Data Option 2:

Favorite Girl Scout Cookie: Survey of Friends and Family

Favorite Cookie	Number of People
Thin Mints	13
Samoas	10
Tagalongs (PB Patties)	5
Smores	7
Do-si-dos (PB Sandwich)	5
Others	10

Data Option 3: National Sales Data from 2016



Other Data

How Many Cookies Should I Order for a Booth?

Here's what I use for the booths in my area:
(All numbers are per 3-4 hour booth, in cases)

Busy booth (over 45 boxes per hour):

Thin Mints: 8
Samoas: 7
Tagalongs: 4
Do-Si-Dos: 2
Lemon: 1
Trefoils: 2
Other varieties: 1 each

Medium booth (30-45 boxes per hour):

Thin Mints: 6
Samoas: 5
Tagalongs: 4
Do-Si-Dos: 2
Lemon: 1
Trefoils: 1
Other varieties: 1 each

Slow booth (under 30 boxes per hour):

Thin Mints: 4
Samoas: 3
Tags: 2
Do-si-Dos: 1
Lemon: 1
Trefoils: 1
Other varieties: 1 each

IMPORTANT: Don't run out of Thin Mints and Samoas! You can't have a booth without them. When in doubt bring more of these two varieties. It's always better to have too many than not enough.

Students can compare their recommendations to the recommendations of others working on the same problem.

PROFITS TASK: The Girl Scout Troop wants to estimate how much profit their troop will make when they sell boxes of Girl Scout Cookies at the grocery store?

- What do you know that could help you figure this out?
- What do you need to know?
- What assumptions will you have to make?

What do you notice? What do you wonder?
How could this information help you?

How the Cookie Crumbles

All of your tasty favorites and our new 100th Anniversary cookie are to be sold for \$5 a box.



Council Proceeds per \$5 Box

- Cost of cookies
- Girl rewards (patches, trips, cookie dough cards)
- Potential troop proceeds (see tiered proceeds)
- Area team proceeds
- Council programming
 - Programs for underserved girls
 - Camp
 - Volunteer support
 - Financial assistance
 - Property improvement & maintenance

100% of cookie proceeds stay in Southern Arizona and benefit local Girl Scouts.

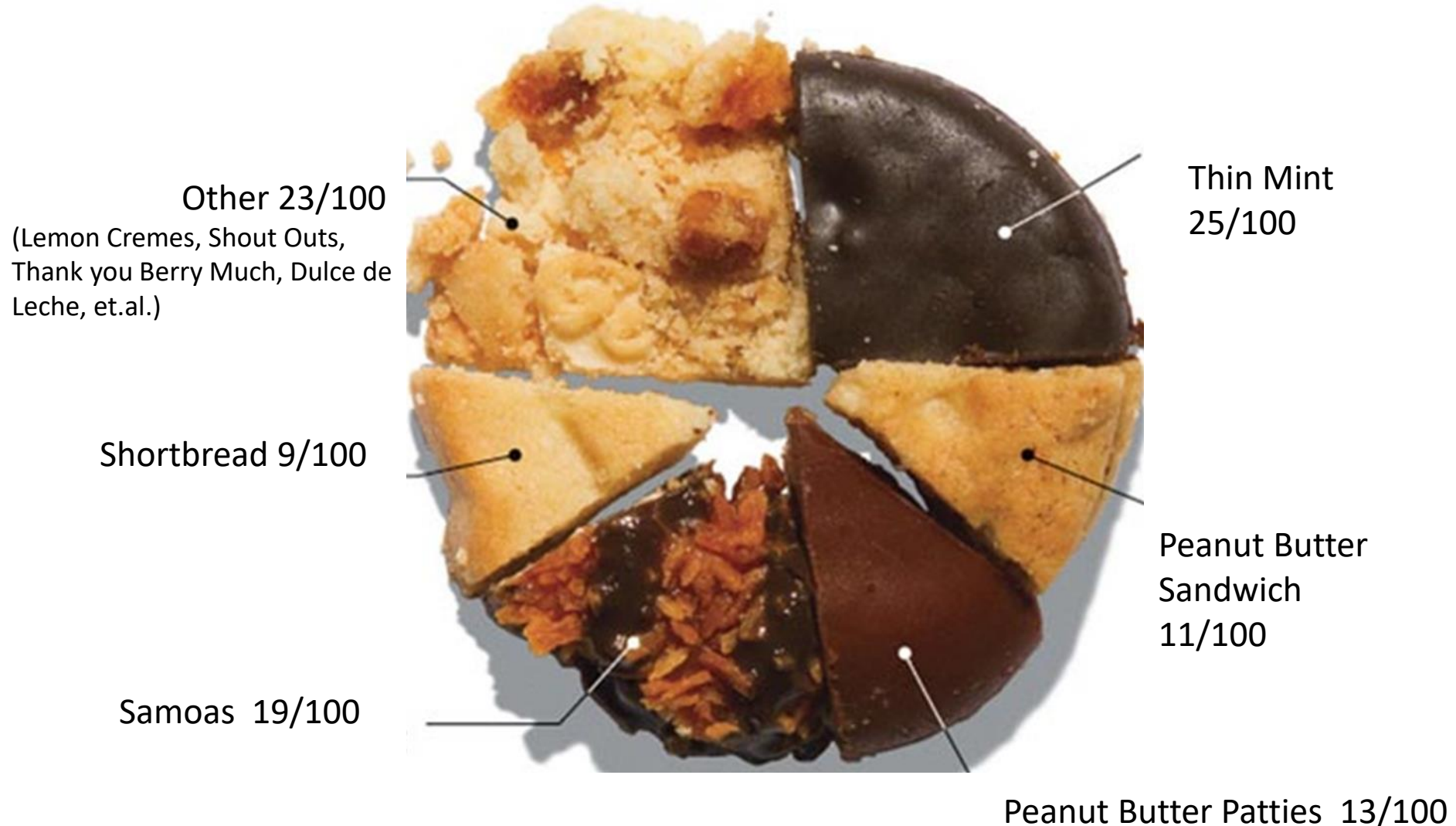
Estimate the profits that the Girl Scout Troop will make (for their troop) when they sell Girl Scout Cookies at the grocery store.

Explain your estimate using words, numbers and calculations.

Identify and explain each of the assumptions you made.

Explain how changing your assumptions would change your estimate.

Favorite Girl Scout Cookies – What do you notice? What do you wonder?



Favorite Girl Scout Cookies – What do you notice? What do you wonder?

Other 1/4
(Lemon Cremes, Shout Outs,
Thank you Berry Much, Dulce de
Leche, et.al.)

Shortbread 1/10

Samoas 2/10



Thin Mint 1/4

Peanut Butter
Sandwich
1/10

Peanut Butter Patties 1/10