

Sweet Treats

In this project you will be charged with creating a profitable store selling various different drinks and dessert goods. You will be submitting the results of your project to your teacher, so it is important that you include your work and document each step. You will be graded on the accuracy of your mathematics, the quality of your work, as well as the content of your project (this includes writing).

Step 1: Select the building

		
Kiosk: 65 customers per day, \$800/month	Storefront: 100 customers per day, \$1500/month	Mall: 500 customers per day, \$6000/month

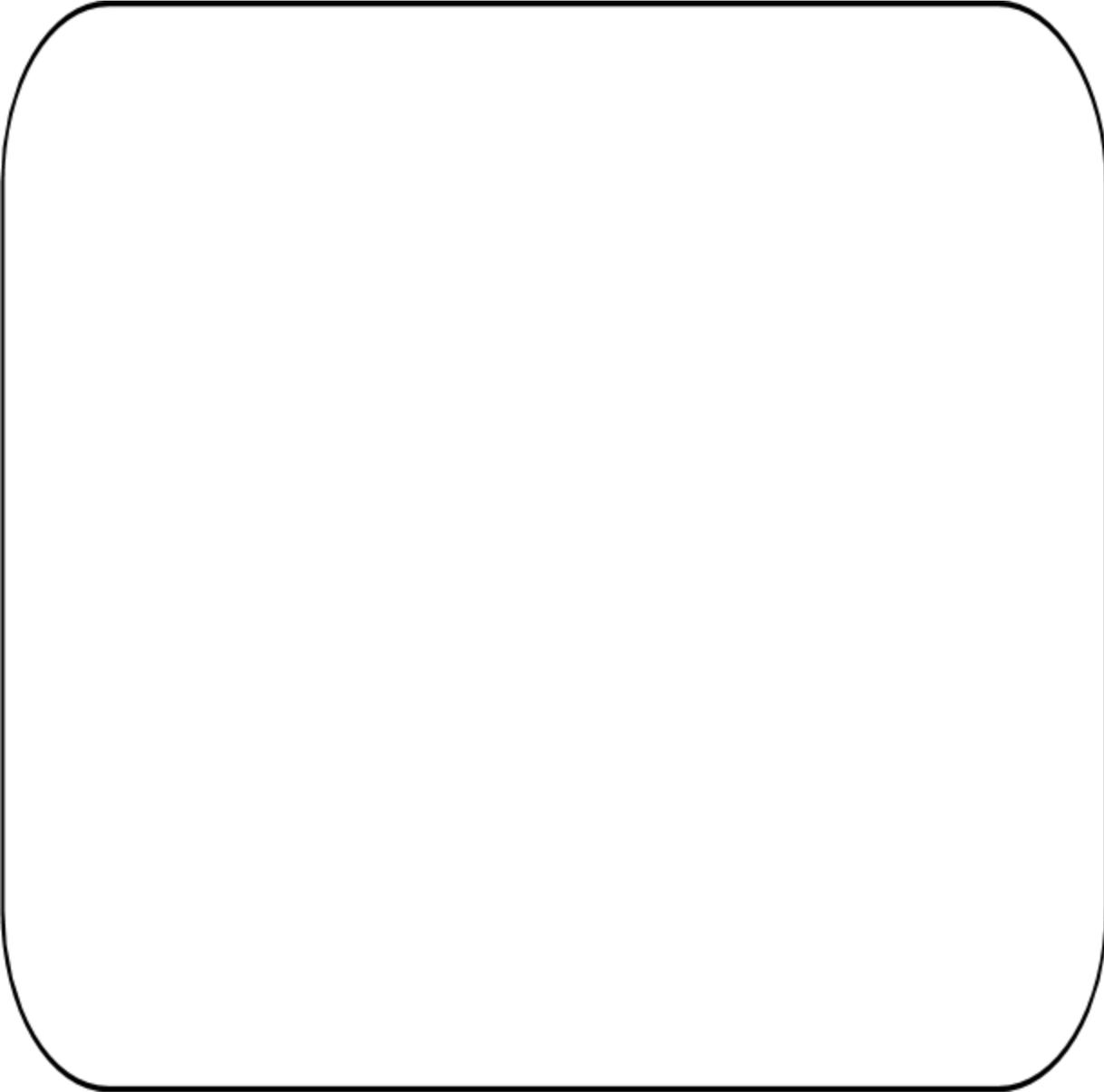
Explain why you chose your building: _____

Step 2: Find the perfect location in New York

Where is your business going to be? _____

Explain why you chose this location: _____

Step 3: Design a logo for your store. The logo will be used on signs and apparel to promote your business.



Step 4: Begin creating your menu. You will select 3 types of products to sell at your store. You can choose from the following containers:

Aluminium can \$0.10	Paper Cup \$0.06	Paper Cone \$0.06	Waffle Cone \$0.20
			
Cylinder	Cylinder	Cone	Cone
Soda, energy drink, tea	Coffee drink, slushie	Snow cone, Dragon's breath, dippin dots	Ice cream

Which containers are you selecting? _____, _____, and _____ . Why did you choose those? _____

Step 5: Continue creating your menu. Fill those containers with something that will sell. Remember that you will be needing to make a profit.

Menu item 1 will be a _____ filled with _____.

Menu item 2 will be a _____ filled with _____.

Menu item 3 will be a _____ filled with _____.

Step 6: Now that you've created you'll need to determine how much of each container and topping you will need to purchase. To do this you will want to begin by finding the volume of each container. Begin by measuring the size of the container, then identify the formula you'll need, and then finding the volume in cubic inches .

Container	Dimensions	Formula	Work	Volume

What does the volume of each container represent? _____

Will any of the containers have more filling in them than they actually hold?
 _____ If yes, then you'll need to recalculate the volume by adding any additional space onto the original shape. Record that work in the space below.

Original Shape & Volume	Added on Shape	Volume of Additional Shape	Total Volume of Product

Step 7: Find the cost (expense) of each menu item. Using the values provided in the table below, calculate your cost for each of your menu items. Don't forget to include the cost of the container.

Filling	Cost per 1oz
Soda	<u>\$0.01</u>
Coffee	<u>\$0.02</u>
Tea	<u>\$0.10</u>
Energy Drink	<u>\$0.18</u>
Slushie	<u>\$0.05</u>
Snow of Cone	\$0.05
Dragon's Breath	\$0.30
Ice Cream	<u>\$0.05</u>
Whipped Cream	<u>\$0.19</u>

1	=	0.554113
Cubic inch		US fluid ounce

Menu Item	Volume	Cost of Filling	Cost of Container	Total Cost to Make

Step 8: Time to sell! Now that you know how much it costs for your three menu items, how much do you think would be a reasonable price to sell them for? Based on your type of store you have _____ customers per day total. You must have at least $\frac{1}{4}$ of your customers buy each item, but you can advertise one item more to get the remaining $\frac{1}{4}$ to buy whichever item you want.

Menu Item	Total Cost	Customers per item	Sale Price	Total Revenue
		$(\frac{1}{4})$		
		$(\frac{1}{4})$		
		$(\frac{1}{2})$		

Step 9: How did your business do? Add up your total expenses and your total earnings (revenue). Subtract your Total Expenses sum from your Total Earnings sum. The profit of your company will be the difference of these two amounts if it is a positive number. If you end up with a negative number that means that your company lost money.

Scoring Rubric

	Beginning (1)	Developing (3)	Proficient (5)
Store Design	Your store selection and/or location is not clear. You haven't created a logo. You are missing your explanation.	You have selected a store with location and created a logo that is sloppy or incomplete. You could have explained your choices in more detail.	You have selected a store with a location and created a logo that is neat. Your explanation is clear and well-written.
Cylinder	Your dimensions are not measured or calculated correctly. Volume isn't calculated.	You need to more clearly identify what your dimensions are for your shape. Your calculation of volume isn't correct.	You have clearly identified all measurements of your shape. You have shown all steps to accurately calculate volume.
Sphere	Your dimensions are not measured or calculated correctly. Volume isn't calculated.	You need to more clearly identify what your dimensions are for your shape. Your calculation of volume isn't correct.	You have clearly identified all measurements of your shape. You have shown all steps to accurately calculate volume.
Cone	Your dimensions are not measured or calculated correctly. Volume isn't calculated.	You need to more clearly identify what your dimensions are for your shape. Your calculation of volume isn't correct.	You have clearly identified all measurements of your shape. You have shown all steps to accurately calculate volume.
Profit Margin	You did not calculate your profit. You are losing money for your business.	Your calculations for profit are incomplete or messy. You are not making money.	Your calculations for profit are complete and neat. You are making money for your business.