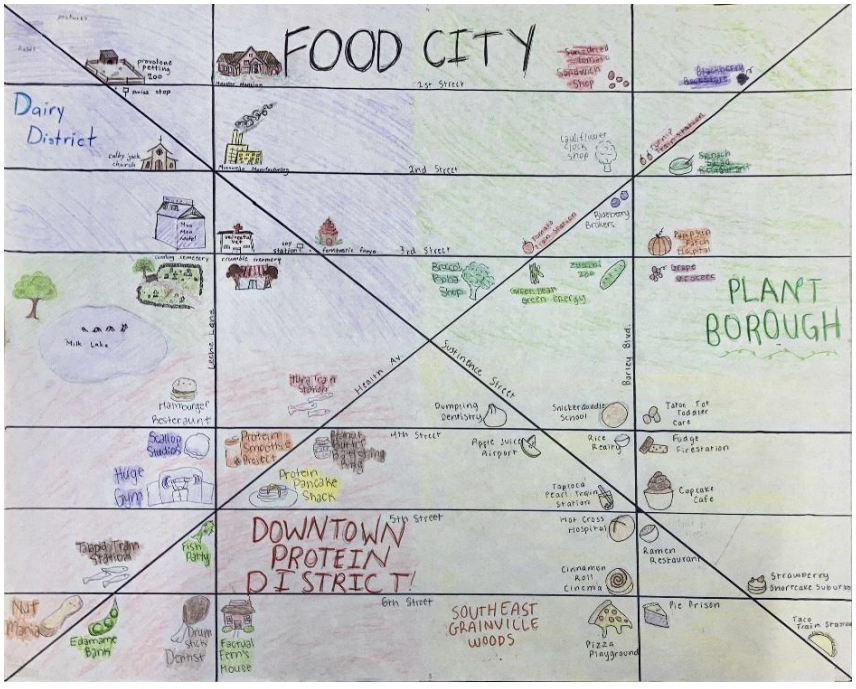
Food City

Names of all Group Members:
Member 1: Eden - Dairy District
Member 2: Fern - Downtown Protein District
Member 3: Nell - Grainville Woods

Introduction:

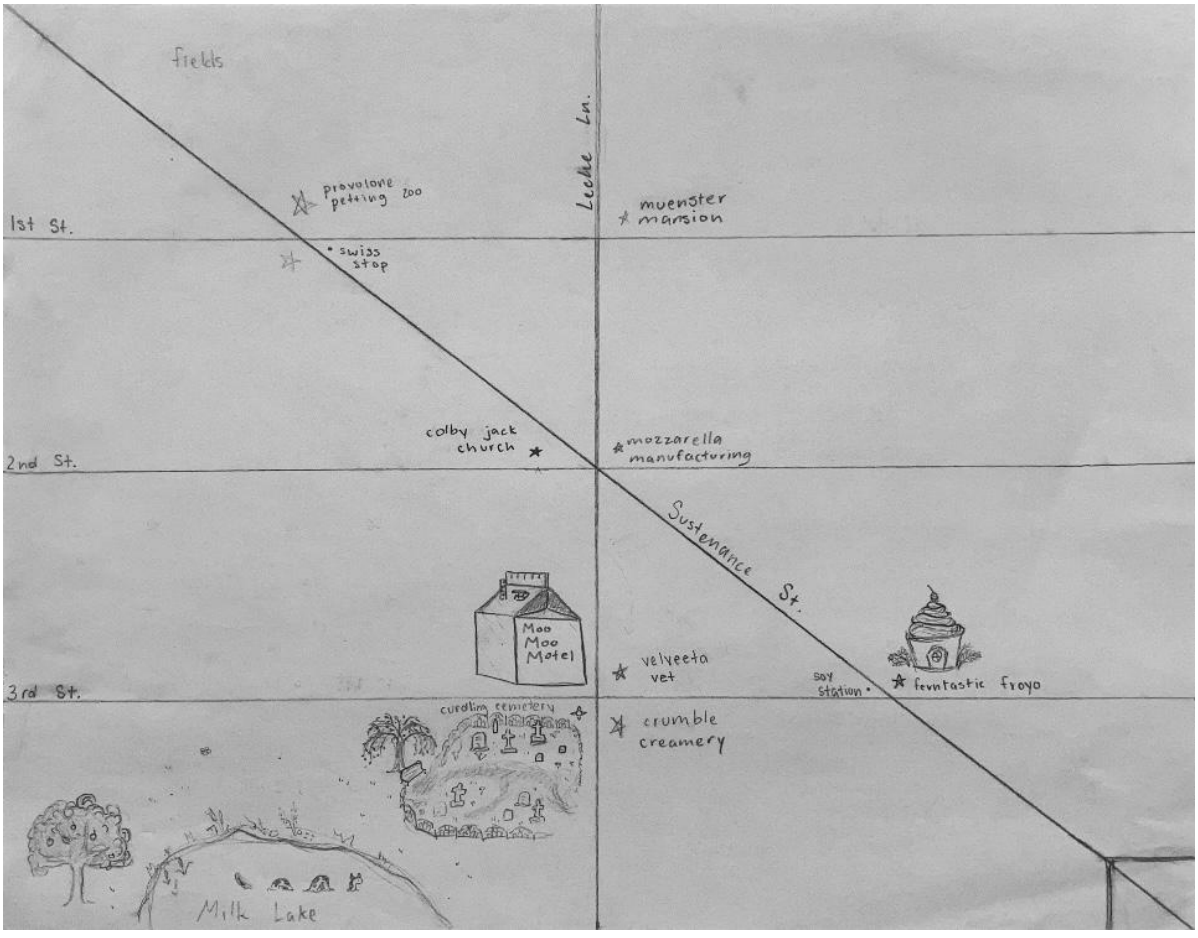
Welcome to Food City! We are so happy you could make it! Our city is split into 4 quadrants: Downtown Protein District, filled with big gyms and so many protein-filled foods. There's also Grainville Woods, where you can find all of your favorite snacks and desserts. Plant Borough is filled to the brim with fruits and veggies. And lastly Dairy District, where you can find your favorite cheeses, and even a froyo store on the way! We'd recommend stopping through all quadrants during your visit because all have so much to offer. Everyone who enters Food City comes out with a big smile on their face. We hope you have an amazing time, and always feel free to contact our leadership team, Fern, Nell, and Eden if you need anything.



Designer: Eden - Dairy District

Welcome to the Dairy District, where all your desires for ice cream, milk, yogurt, and cheese can be fulfilled. Hop onto the Sustenance St. Train line and make your way to Swiss Stop, where you'll find the Provolone Petting Zoo, property of Provolone Farm, humanely housing the city's livestock. Some residents of Food City claim to have seen Granny emerge from Moo Moo Lake, others say she originally came from the cemetery. Regardless of these spooky rumors, the Milk Lake Monster is quite friendly and all of Moo Moo Meadows has a reputably inviting aura that can make anyone feel at home. All this makes the Moo Moo Motel quite popular, where you can count cows all the way into your dreams.

Map and Instructions of Quadrant:



- Crumble Creamery
- Moo Moo Meadows
    - Milk Lake
    - Moo Moo Motel
    - Curdly Cemetery
- Mozzarella Manufacturing
- Colby Jack Church
- Muenster Mansion
- Provolone Petting Zoo
- Velveeta Vet
- Ferntastic Froyo
- Sustenance St. Train Line
    - Soy Station
    - Swiss Stop

☐ In the Dairy District, There are **three parallel roads** equidistant from each other running from east to west: 1st st, 2nd st, and 3rd st.

☐ Leche Ln. runs **perpendicularly** through 1st, 2nd, and 3rd streets and goes all the way down into the Downtown Protein district.

☐ Sustenance St. is a diagonal street with a negative slope running from the northwest corner of the city to the southeast corner. It intersects every street in the Dairy District and forms a six-way intersection with Leche Ln. and 2nd St.

☐ Muenster Mansion is located at the **northeast** corner of the intersection at **1st** and **Leche**

☐ Curdling Cemetery is the **southernmost alternate exterior angle** of Muenster Mansion in the Dairy District

☐ Velveeta Vet is **vertical** to Curdling Cemetery

- ☐ Mozzarella Manufacturing is a **corresponding angle** that is **congruent** to Velveeta Vet
- ☐ Ferntastic Froyo is a **non congruent** but **corresponding angle** of Velveeta Vet
- ☐ Velveeta Vet and Soy Station are **consecutive** angles
- ☐ Soy Station and Ferntastic Froyo form a **linear pair**
- ☐ Ferntastic Froyo and Provolone Petting Zoo are **congruent** and **corresponding angles**
- ☐ Provolone Petting Zoo and Swiss Stop form a **linear pair**
- ☐ Swiss Stop and Soy Station are **alternate interior angles**
- ☐ Swiss Stop and Colby Jack Church are **alternate interior angles**
- ☐ Soy Station and Colby Jack Church are **consecutive angles**
- ☐ Velveeta Vet, Mozzarella Manufacturing, and Muenster Mansion are all **consecutive angles**
- ☐ Moo Moo Motel is a **non congruent** but **corresponding angle** of soy station
- ☐ Crumble Creamery is **vertical** to Moo Moo Motel
- ☐ Milk lake is **equidistant** to 3rd St and 4th St
- ☐ Milk lake is **equidistant** to Leche Ln. and the city's western border

Triangle and Triangle Theorems:

[Include a statement that describes this section.]

[Insert work for Pythagorean Theorem Problem]
Show all work including relevant diagrams and calculations. Make sure to discuss your process and your answer in the context of your town map.

[Insert work for Triangle Angle Sum/Exterior Angle Problem]

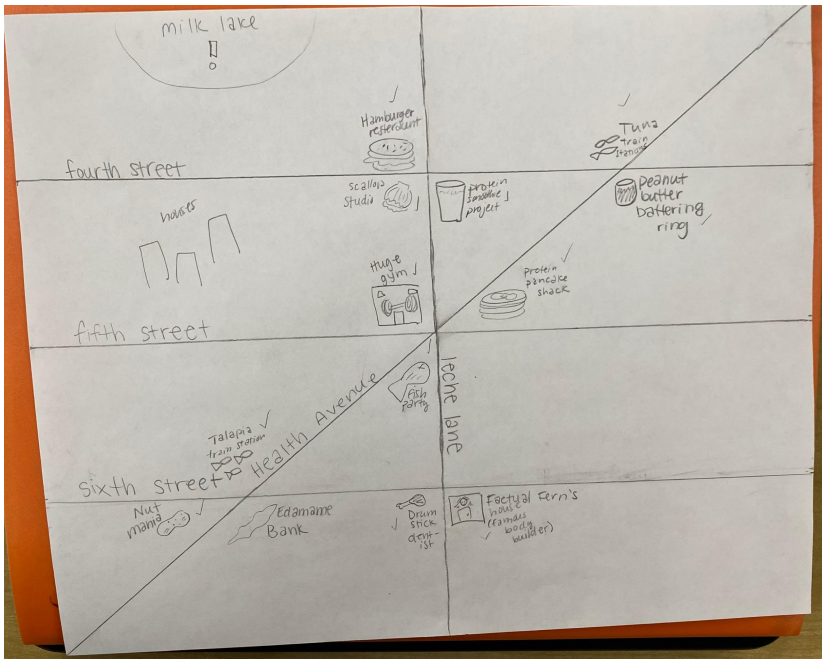
Show all work including relevant diagrams and calculations. Make sure to discuss your process and your answer in the context of your town map.

(Insert transition statement here)

Designer: Fern - **Downtown Protein District**

Welcome to the Downtown Protein District! We are the Southwest quadrant, who take pride in our giant gyms and heavy lifters. Be sure to check out our famous peanut butter battering ring, where the famous bodybuilder (and our quadrant leader) Fern Duffy trains! Another place you should check out is our milk lake, the only lake in the world where the liquid is pure milk. We have two train stations, Tuna and Tilapia, on the Health Ave route. You can take that train all the way into Plant Borough! You can also check out the notable Edamame Bank, which keeps your money safe and sound! At Scallop Studios, you have a chance to be creative! This is the best place to go if you're wanting to make art. Finally, you might find your way to the Fish Party, where you can have a good time while frying and munching some yummy fish!

Map and Instructions of Quadrant:



Hamburger Restaurant, Scallop Studios, Milk Lake, Huge Gym, Fish Party, Tilapia Train Station, Nut Mania, Edamame Bank, Drumstick Dentist, Factual Fern's Residence, Protein Pancake Shack, Protein Smoothie Project, Peanut Butter Battering Ring, Tuna Train Station.

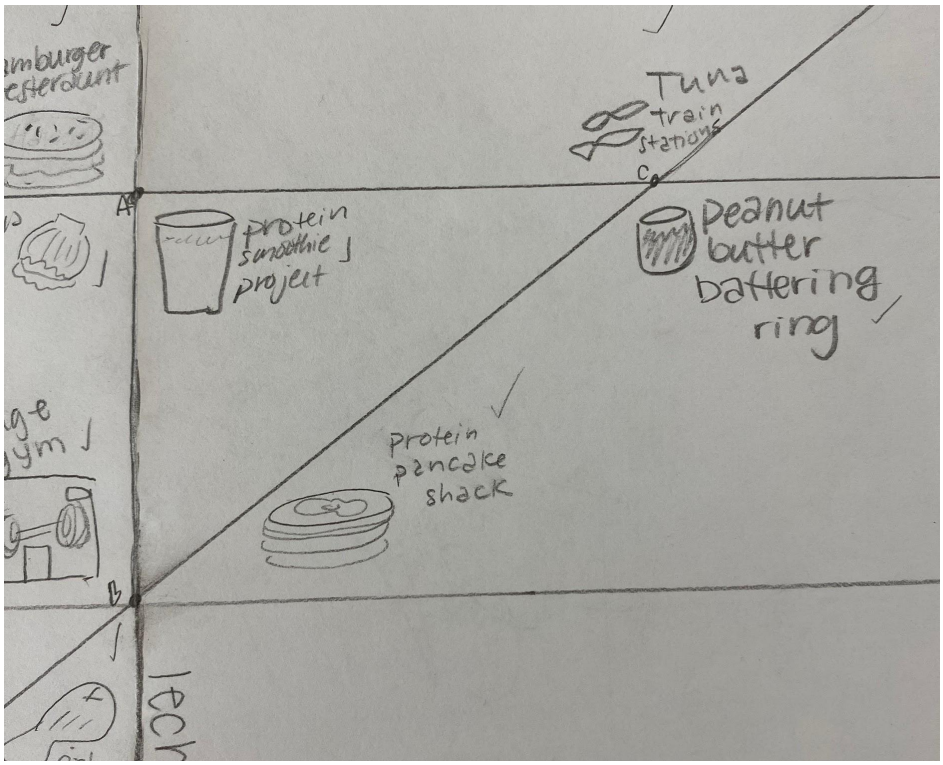
Instructions:

- ☐ There are 3 main roads going east to west that split my quadrant evenly into 4 blocks. They are all **parallel**. The North road is **fourth,** the middle road is **fifth**, and the South street is **sixth** street.
- ☐ The fourth road, **Leche Lane**, which is perpendicular to **fourth, fifth,** and **sixth** street, cuts them all in half going from North to South.
- ☐ The next street, **Health Avenue,** is the **transversal** that cuts across the map from the Southwest corner to the Northeast. This must **intersect** in the middle of the map, making a **right angle** with fourth street and Leche lane being the other **legs.**

- ☐ At the intersection that is made by Health Ave and Fourth Street, there are **two obtuse angles.** In the top obtuse angle, you will find the **Tuna Train Station.** In the lower angle, there is the **Peanut Butter Battering Ring.**
- ☐ In the east-facing **acute angle** created by Health Ave and fifth street, there is a **protein pancake shack**.
- ☐ In the intersection made by Leche Lane and Fourth Street, There are **4 right angles** and 3 of them have establishments.
- ☐ In the lower right corner of the map, there is a **perpendicular intersection** made by sixth street and Leche lane. On the left side of that Intersection is the **Drumstick Dentist**, and it has a linear Pair along sixth street, **Factual Fern's Residence.**
- ☐ In the **two right angles** made by fourth street, fifth street, and Leche lane, there is a **consecutive angle pair.** In the upper right angle, you will find **Scallop Studios,** which also makes an **alternate interior angle relationship** with **protein pancake shack**, and in the lower right angle, you will find **Huge Gym,** which makes an **alternate exterior relationship** with **Factual Fern's Residence.**
- ☐ **Hamburger Restaurant** is the **corresponding angle** of **Huge Gym.**
- ☐ **Protein Smoothie Project** is **vertical** to **Hamburger restaurant.**
- ☐ In the right triangle made by Leche Lane, Health Avenue, and sixth street, there is **Fish party in** the upper part of the triangle.
- ☐ In the intersection of Health Avenue and sixth street, there are **two obtuse angles and two acute angles.** In the West-most corner, (The acute angle), There is **Nut Mania**. Going east, The **Edamame bank** has a **supplementary relationship** with **Nut Mania.**
- ☐ **Tilapia Train Station** is at the **vertical angle** of **Edamame Bank.**
- ☐ **Milk Lake** is found in the NorthWest part of the map, where it connects to the **Dairy District.**

Triangle and Triangle Theorems:

Hi there, traveler! We need some help! There is a small triangle plot of land in the Northeast part of the Downtown Protein District, where you can find the **Protein Smoothie Project.** We lost all the documents a while back, so can you find the hypotenuse so we can accurately find the distance between the **Peanut Butter Battering Ring** and the center of the city? We know that from point A to point B, it is 5.4 miles, and from point A to point C is 6.9 miles. Use this formula: $a^2+b^2=c^2$!

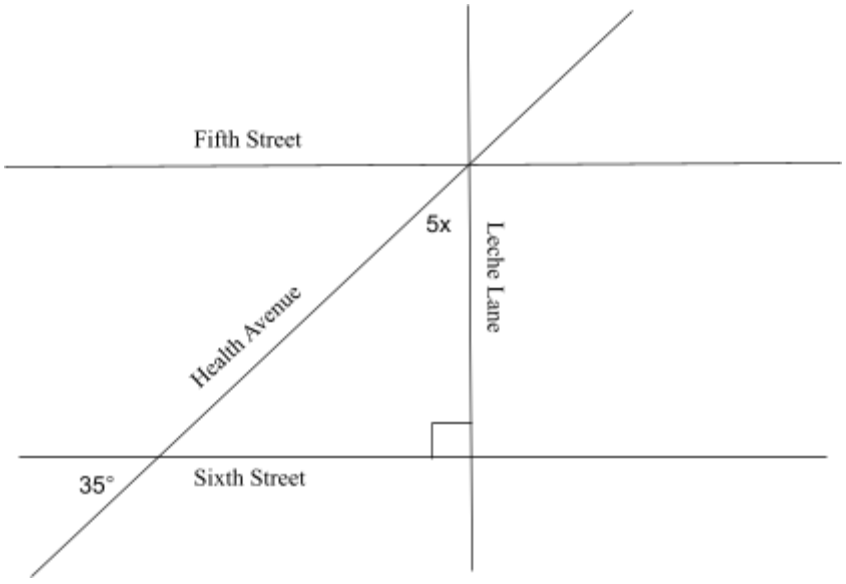


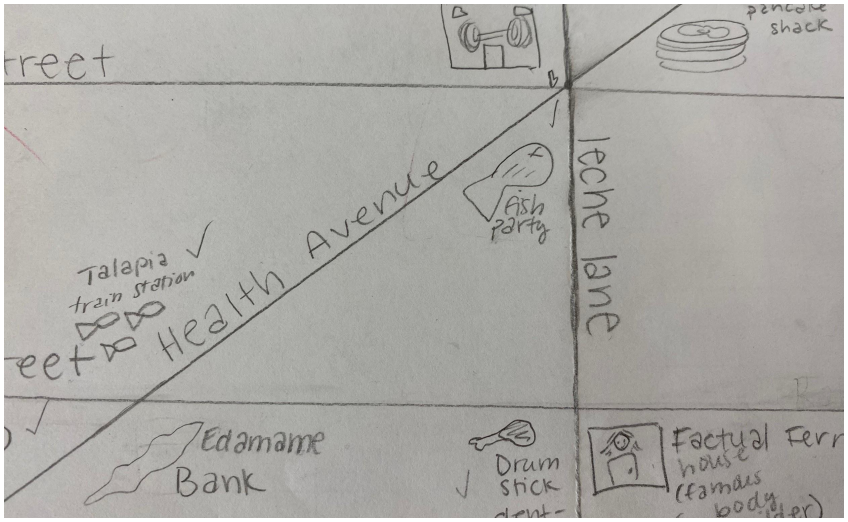
Statements	Explanations
AB=5.4, AC=6.9	Given
$a^2+b^2=c^2$	Pythagorean Theorem
$(AB)^2+(AC)^2=(BC)^2$	Substitution

$5.4^2 + 6.9^2 = (BC)^2$	Substitution
$29.16+47.61=(BC)^2$	Simplification
$76.77=(BC)^2$	Addition
$8.8 \approx BC$	Square root
$(5.4)^2 + (6.9)^2 = (8.8)^2$	Substitution
$\approx 77 = \approx 77$	Simplify + Check

We have found that from point B to point C, it is 8.8 miles. We know now that it is quite a long trek, so we would not suggest trying to walk that distance. Thank you for helping us!

Are you up for another challenge? We are trying to find the angles for this right triangle using the Triangle Angle Sum Theorem and the Exterior Angle Theorem! We need to solve for x.





Thank you for helping us out! Check your work here:

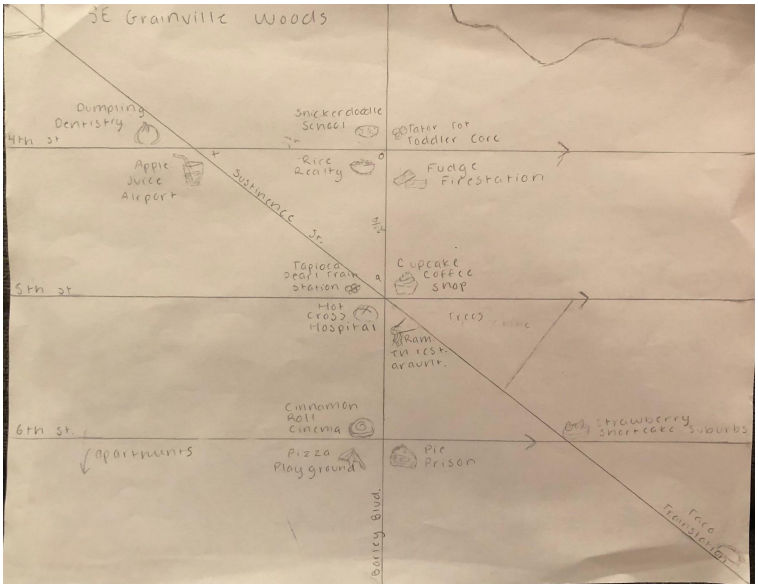
$35 + 90 = 125$
$180 - 125 = 55$
$5x = 55$
$x = 11$

Check:
$35 + 90 + 11(5) = 180$

Congrats! We are so thankful for all your help!

Be sure to check out another favorite in Food City, South East Grainville Woods! My best friend, Granny Grains is the leader of this quadrant, and her Granddaughter Grains is helping her out. If you see them, tell them Factual Fern sent you!

Designer: Nell - South East Grainville Woods



Welcome to SE Grainville Woods, the South East corner of food city! Our corner is filled with all of your favorite snacks and delicious desserts. During your visit make sure to check out the Cupcake Cafe - one of my all-time favorite cafes - where everything is cupcake themed! Also be sure to stop by the Ramen Restaurant where you can eat the best ramen of your life, and pose by the biggest bowl of ramen that made it into the Guinness book of records! You can't miss the Cinnamon Roll Cinema, where each ticket you buy comes with a complementary cinnamon roll! If you're ready to check out some other parts of Food City, I would 100% recommend departing from the Tapioca Pearl Train Station where boba shops are everywhere, including on the train! Be sure to visit Downtown Protein District, to the West of here, and tell Factual Fern, I say hi!

Here is a list of all the places found in Grainville Woods, I highly recommend stopping by as many as you can!

- ➔ Dumpling Dentistry
- ➔ Snickerdoodle School
- ➔ Tater Tot Toddler Care
- ➔ Apple Juice Airport
- ➔ Rice Realty

➔ Fudge Fire Station
➔ Tapioca Pearl Train Station
➔ Cupcake Cafe
➔ Hot Cross Hospital
➔ Ramen Restaurant
➔ Cinnamon Roll Cinema
➔ Strawberry Shortcake Suburbs
➔ Pizza Playground
➔ Pie Prison
➔ Taco Train Station

Instructions:

Just in case you lose your map, here are the instructions we always use when making new ones. Be very careful though, it's easy to make a mistake!

- ☐ There are three main **parallel** streets going east to west in my quadrant. North road is **4th st**, the middle road is **5th st**, and the south road is **6th st**.
- ☐ There is one main street going north to south in my quadrant called **Barley Blvd** that is **perpendicular** to the three parallel streets.
- ☐ There is one diagonal street that **intersects** all of the streets going from the northwest corner to the southeast corner called **Sustenance street**.
- ☐ In the intersection made by sustenance street and 4th street, there are two **obtuse angles** and two **acute angles**. On the south-facing obtuse angle, there is **Apple Juice Airport**.
- ☐ Apple Juice Airports **linear pair** along sustenance street is **Dumpling Dentistry**.
- ☐ Dumpling Dentistry and **Tapioca Pearl Train Station** are **corresponding angles**.

- ☐ In the **right angle** of the **right triangle** formed by sustenance street, 4th street, and barley boulevard is **Rice Realty**.
- ☐ **Vertical** to Rice Realty is **Tater Tot Toddler Care**.
- ☐ Tater Tot Toddler Care and **Snickerdoodle School** are supplementary and are both on the north side of 4th st. They should all be at the same intersection as Rice Realty.
- ☐ Rice Realty and **Fudge Firestation** are supplementary and are both on the south side of 4th st.
- ☐ If Barley Blvd. acted as the **transversal** of 4th and 5th street then Rice Realty and **Cupcake Cafe** would be **alternate interior** angles, and Tater Tot Toddler Care and **Hot Cross Hospital** would be **alternate exterior**.
- ☐ If Barley Blvd. acted as the transversal of 5th and 6th street then Hot Cross Hospital and **Cinnamon Roll Cinema** would be **consecutive angles**.
- ☐ **Vertical** to Cinnamon Roll Cinema is **Pie Prison**.
- ☐ **Adjacent** to Pie Prison on the south side of 6th street is **Pizza Playground**.
- ☐ On the northeast corner of the intersection made by 6th street and Sustenance street is Strawberry Shortcake Suburbs.
- ☐ Finally, at the southeast corner of my quadrant, on the north side of sustenance street is **Taco Train Station**.

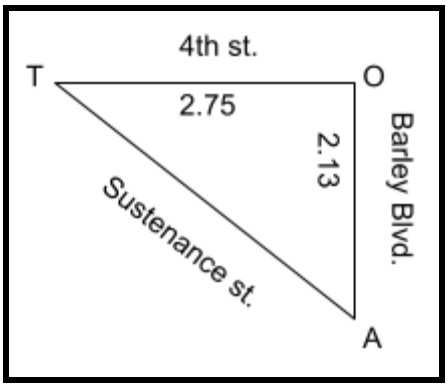
Triangle and Triangle Theorems:

At SE Grainville Woods, we are very proud of our triangular plots of land, and many of our visitors like to check them out during their stay. Unfortunately, all of our papers that had the angles measures and lengths for each side disappeared! Although our triangles are beautiful, walking along

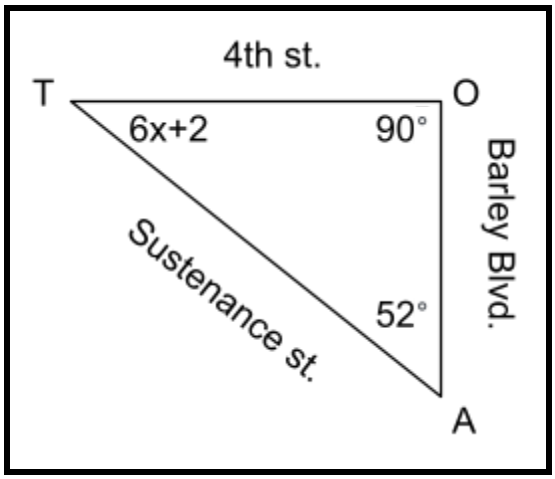
two sides is quite a trek. Can you find the missing angle and side length so that everyone can enjoy our beautiful triangles?

Help us find the missing side!

Statement	Explanation
$OA = 2.13,\ OT = 2.75$	Given
$a^2 + b^2 = c^2$	Pythagorean Theorem
$OA^2 + OT^2 = TA^2$	Substitution
$2.13^2 + 2.75^2 = TA^2$	Substitution
$4.54 + 7.56 = TA^2$	Simplify
$12.1 = TA^2$	Combine Like Terms
$3.48 = TA$	Square Root
$2.13^2 + 2.75^2 = 3.48^2$	Equation
$12.1 = 12.1$	Check



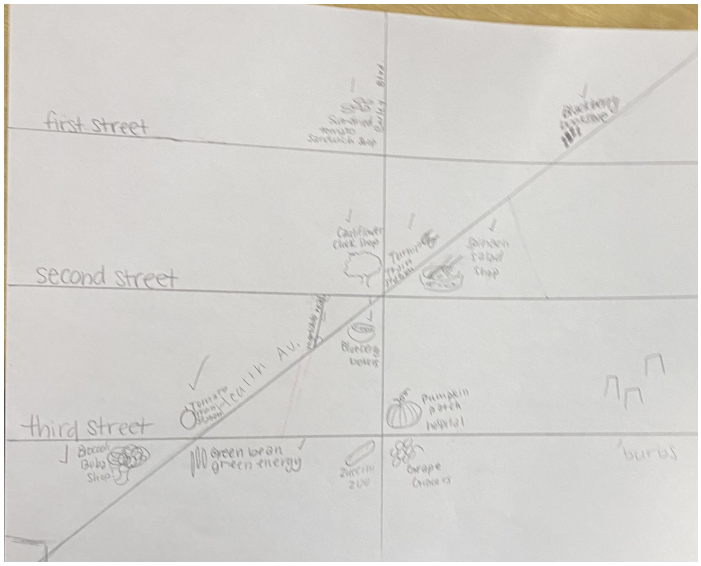
Help us find the missing angle!



$90 + 52 = 142$
$180 - 142 = 38$
$38 - 2 = 6x + 2 - 2$
$36/6 = 6x/6$
$6 = x$
Check:
$90 + 52 + 6(6) + 2 = 180$

We appreciate all your help with our triangles! I hope you had a fun visit, and if you are looking to uncover even more fun during your visit, I'd suggest taking a trip to plant borough (description below)!

Designer: Fern and Nell - Plant Borough



Down in the NorthEast Quadrant, we value our plants over everything else! Be sure to check out some of our famous pit stops, like the Cauliflower Clock Shop. We also have the Broccoli Boba shop, where you can order a special variety of gourmet boba. It's tradition to try the celebrated spinach boba drink! That was where the old leader of our Borough used to go all the time before they died of … unknown causes… ANYWAYS! If you happen to get hurt, check out our pumpkin patch hospital, they'll patch you right up! Finally, if you're looking to have a fun day out on the town, check out Zucchini Zoo! We have quite a few endangered animals there, like Giant bamboo-eating pandas, sea turtles, and even cross-river gorillas! When you're ready to go, hop on to the Health Avenue train at one of the two stops.

Following this is a list of places you will find in Plant Borough. We hope you get the chance to stop by all of them before you leave!

➔ Sun-Dried Tomato Sandwich Shop
➔ Cauliflower Clock Shop
➔ Turnip Train Station
➔ Spinach Salad Shop
➔ Blackberry Bookstore
➔ Blueberry Brokers
➔ Tomato Train Station
➔ Broccoli Boba Shop
➔ Green Bean Green Energy
➔ Zucchini Zoo
➔ Grape Grocers
➔ Pumpkin Patch Hospital

Here are the instructions for the map, incase it gets lost and you need to recreate it!

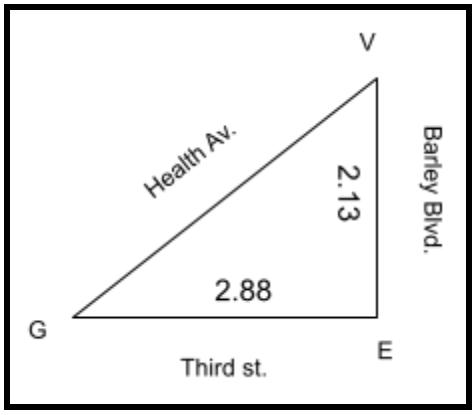
- ☐ There are 3 main roads going east to west that split my quadrant evenly into 4 blocks. They are all parallel. The North road is first, the middle line is second, and the South street is third street.
- ☐ The fourth road, Barley Blvd, that is perpendicular to fourth, fifth, and sixth street, cuts them all in half going from North to South.
- ☐ There is another small road that connects second street to third street, that is closer to the intersection of Barley Blvd and second street.
- ☐ The fifth street, Health Avenue, is the transversal that cuts across the map from the Southwest corner to the Northeast corner. This must intersect in the middle of the map, making a right angle with first street and Barley Blvd in the top right corner.
- ☐ Sun-Dried tomato Sandwich Shop is in the Northwest-facing angle made by first street and Barley Blvd.

- ☐ Cauliflower Clock Shop is in the corresponding angle of the sandwich shop.
- ☐ In the upper obtuse angle formed by first street and Health ave, there is the Blackberry Bookstore.
- ☐ The Turnip Train Station is in the corresponding angle of the Blackberry Bookstore.
- ☐ The Spinach Salad Shop is the complementary angle to the turnip train station.
- ☐ Blueberry Brokers is located in the south-facing acute angle made by Health Ave and Barley Blvd.
- ☐ Green Bean Green Energy is Cauliflower Clock shop's alternate exterior angle when health avenue acts as the transversal of second and third street. In this situation Tomato Train Station is the alternate interior angle to Blueberry Brokers.
- ☐ Broccoli Boba Shop makes a supplementary relationship with Tomato Train Station along health avenue.
- ☐ In the intersection formed by Barley Blvd and Third Street, there are four right angles. In the Northeast angle, there is the Pumpkin Patch Hospital.
- ☐ South of the Pumpkin Patch hospital, there are two establishments. There is the Zucchini Zoo, which is on the west side of Barley blvd. The Grape Grocers forms a supplementary angle relationship with zucchini zoo, and it is in the east lower right angle.

Triangle and Triangle Theorems:

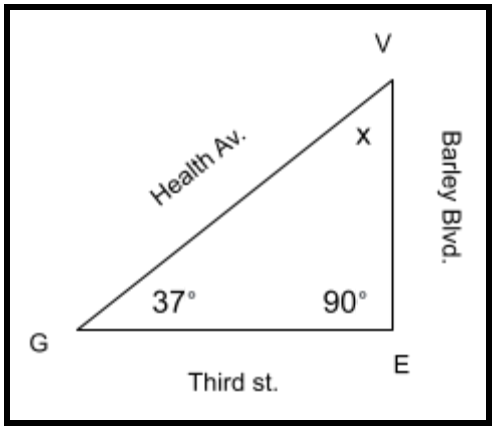
In our map, we have a few triangles. Unfortunately, many years ago the document with all the measurements disappeared and we need your help to create a new document! Can you find the missing angle and length in this triangle?

Find the missing side!



Statement	Explanation
$VE = 2.13,\ EG = 2.88$	Given
$a^2 + b^2 = c^2$	Pythagorean Theorem
$VE^2 + EG^2 = GV^2$	Substitution
$2.13^2 + 2.88^2 = GV^2$	Substitution
$4.54 + 8.29 = GV^2$	Simplify
$12.83 = GV^2$	Combine Like Terms
$3.58 = GV$	Square Root
$2.13^2 + 2.88^2 = 3.58^2$	Equation
$12.83 = 12.83$	Check

Find the missing angle!



$37 + 90 = 127$
$180 - 127 = 53$
$x = 53$

Check:
$37 + 90 + 53 = 180$

It looks like you have come to the end of your stay! We are so happy you could check everything out, but we'll miss you! Feel free to come back anytime!!

Conclusion:

As a group, we learned a lot. We got to know fun facts about each other, and important parts of teamwork. It was super fun to joke around while drawing the map, although we found it challenging to figure out how to manage the fourth quadrant as a group of three. Fern was always working hard on finishing up everything that needed to be done, and their artistic skills added a lot to our final project. Well done Fern! Nell spent many hours putting together her map, and all the hard work she put in was evident in the final

product, which is something we can all be proud of. Congratulations Nell! Eden worked very hard on their visitor's guide, and all the detail they added to their quadrant made such a big difference. Thanks, Eden! Together we made a great team and a super creative city!

As a group, we did well coming up with creative ideas that set us apart from the other groups. On the first day, we were anxious about exactly what our theme would be. When we finally settled on Food City, our minds began racing with endless possibilities. If you take a look at our map, you will see that we have very intelligent names for different establishments on our map. It was quite a challenge to come up with foods in our categories that matched up with the places we wanted to put in our town. In conclusion, we all did a fantastic job coming up with fun ideas and supporting all our ideas equally.

We hope you enjoyed your stay at **Food City**! Be sure to leave a good review on Yelp!