

Superville

Names of all Group Members:

Member 1: Dove

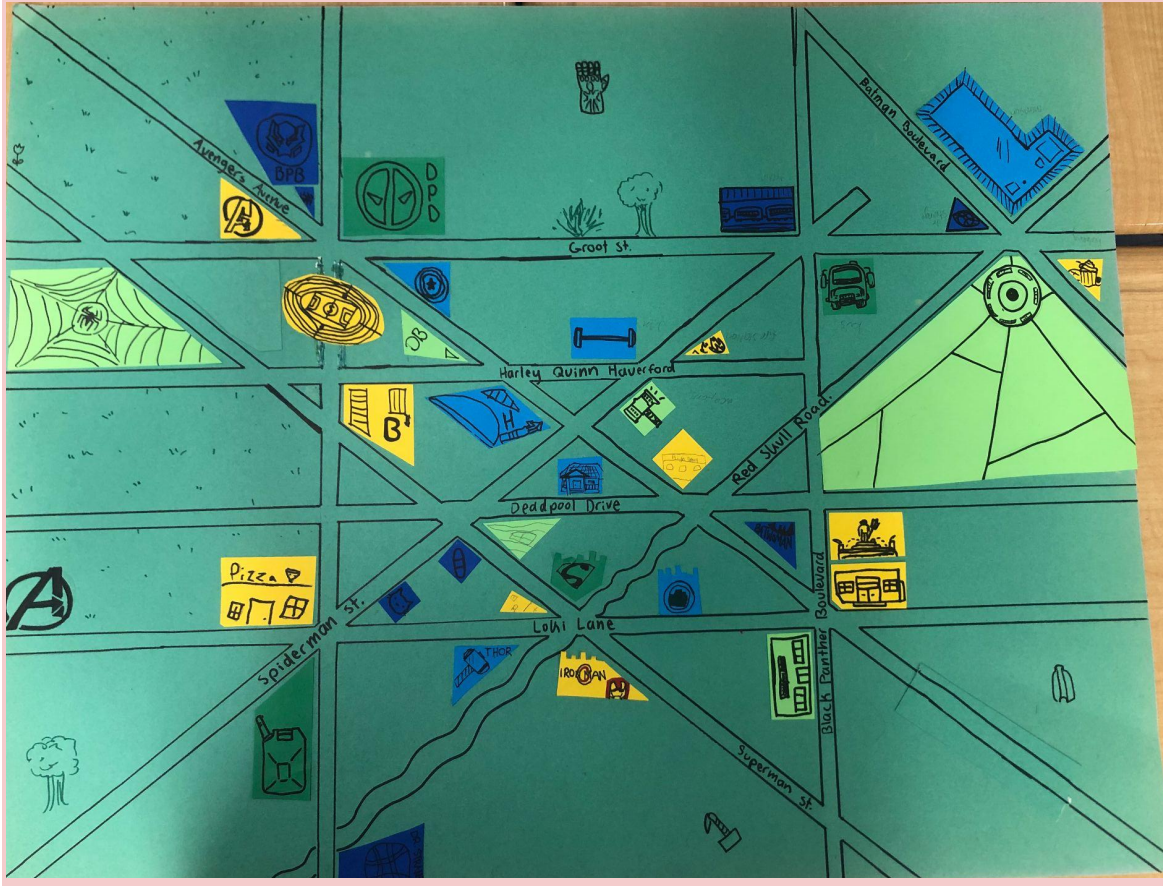
Member 2: Mashrur

Member 3: Brelynn

Member 4: Maddie

Introduction:

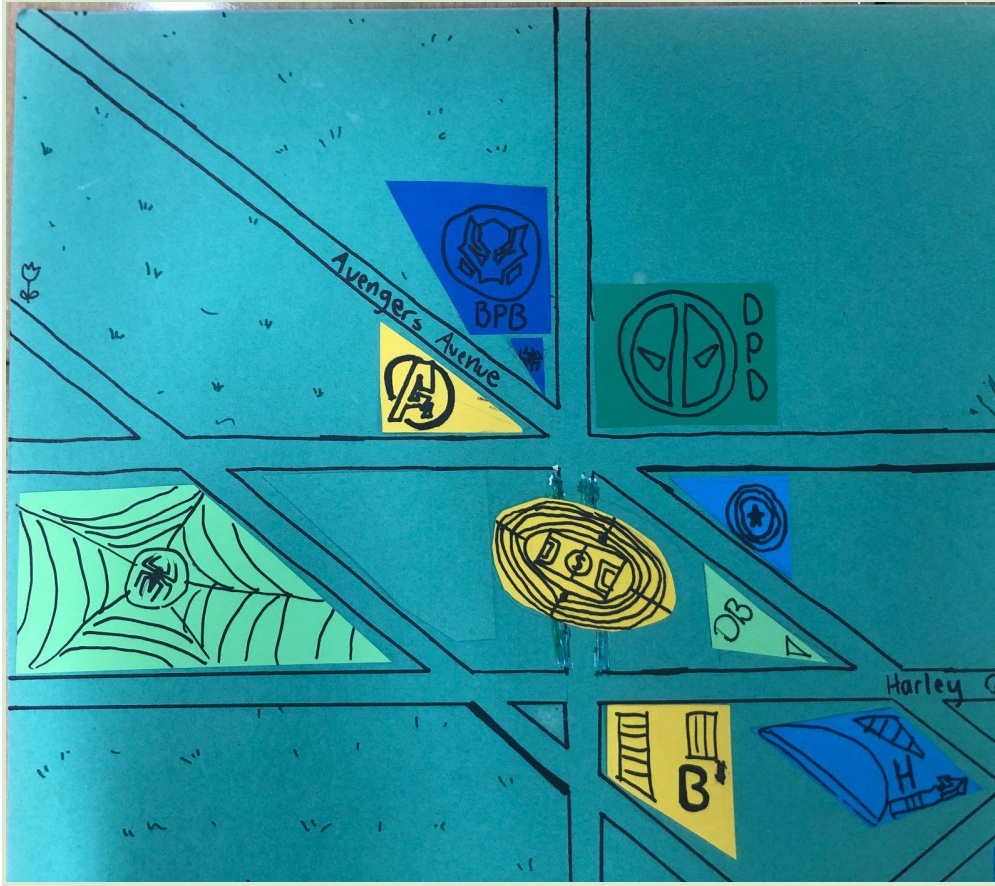
Hello there and welcome to Superville! In this city, all buildings and streets are named after our favorite superheroes. Each quadrant has a different building each named after unique hero. Superheroes are the kind of people that we sometimes look up to, and aspire to be like. Because of this, we want to reflect the importance of superheroes in our town, making it a place people hope and aspire to live in. Not only will you get a chance to explore our superhero town, but you will also learn about different superheroes and how they are relevant to the town. We hope you enjoy exploring Superville as much as we enjoyed writing and illustrating it.



Designer: Dove Smith

Welcome to Quadrant 2! This quadrant features many buildings, such as Spiderman Stadium, Peter Park, and Bruce Bank. This quadrant also includes many sites that are great for tourists from around the world. Quadrant 2 of Heroville is undeniably the best quadrant in Heroville, that features the most popular buildings named after your favorite superhero. No matter who you are, everyone is welcome in quadrant 2 of Heroville!

Map and Instructions of Quadrant:



List of Buildings/Stores

- Bruce Bank (1)
- Daily Bugle (2)
- Hawkeye Hotel (3)
- Deadpool Police Department (4)
- Captain America Convenience Store (5)
- Avengers Tower (6)
- Spiderman Stadium (7)
- Peter Park (8)
- Morales Station (9)
- Black Panther Bodega (10)

Quadrant Instructions

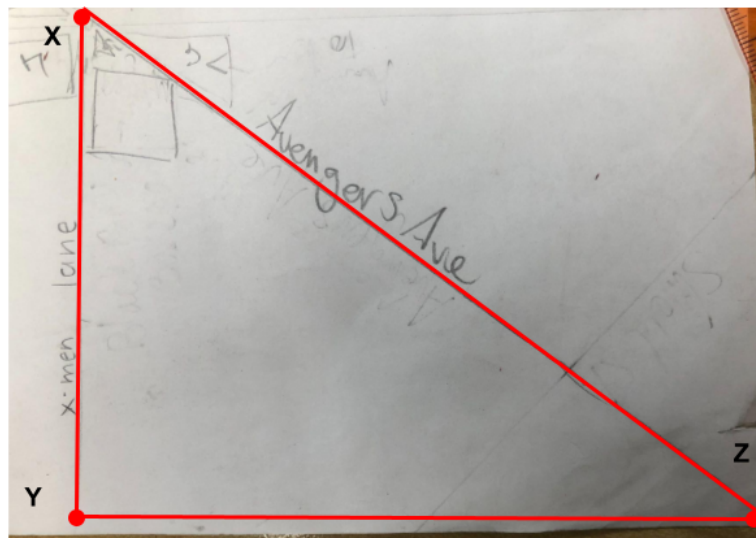
Key ~ 1 inch = .5 mile

- The main two streets in Superville are parallel to each other. The first street, Groot street, runs east to west and divides Superville horizontally into two halves. The other street, Harley Quinn Haverford, runs .5 miles south from Groot street.
- Perpendicular to Groot st. is X-men lane, forming two 90 degree angles and divides the north of Groot street into halves.
- Running from the north-west corner to the south-east corner is Avengers Avenue.
- Avengers Avenue forms a transversal between Groot street and Harley Quinn Haverford in which it forms an obtuse and acute angle. Avengers avenue also forms 3 adjacent angles between X-men lane and Groot street.
- Shield street is south and perpendicular to Harley Quinn Haverford
- West of Shield street and south of Groot street is Superman street that intersects Harley Quinn Haverford and is parallel to Avengers avenue.
- At the southeast angle of Harley Quinn Haverford and Shield street is Bruce Bank (1)
- To the east Bruce Bank (1), a linear pair is formed by Avengers avenue and Harley Quinn Haverford where the Daily Bugle (2) and Hawkeye Hotel (3) are located.
- The Daily Bugle (2) is located north of Harley Quinn Haverford and Hawkeye Hotel (3) to the south.
- Located at the alternate exterior angle of Hawkeye Hotel (3) is Deadpool Police Department (4)
- Located on the alternate interior angle of the Daily Bugle is the triangle shaped Captain America Convenience store (5).
- At the corresponding angle of the Daily Bugle (1) is the Avengers tower (6)
- At the angle consecutive to the Daily Bugle (2) and vertical to Deadpool Police Department (4) is Spiderman Stadium (7)
- Located .5 miles west of Spiderman Stadium (7) is Peter Park (8)
- Located at the adjacent angle north of Spiderman Stadium (7) is Morales station (9)
- Located directly above Morales Station (9) is the Black Panther Bodega (10).

Triangle and Triangle Theorems:

There are many triangles formed by the roads in Quadrant 2 of Heroville. The complex layout of the roads in this quadrant can make it very difficult to navigate through. Because of this, the designers of this town have calculated the distance of the legs on the triangles to make your stay in Heroville unforgettable.

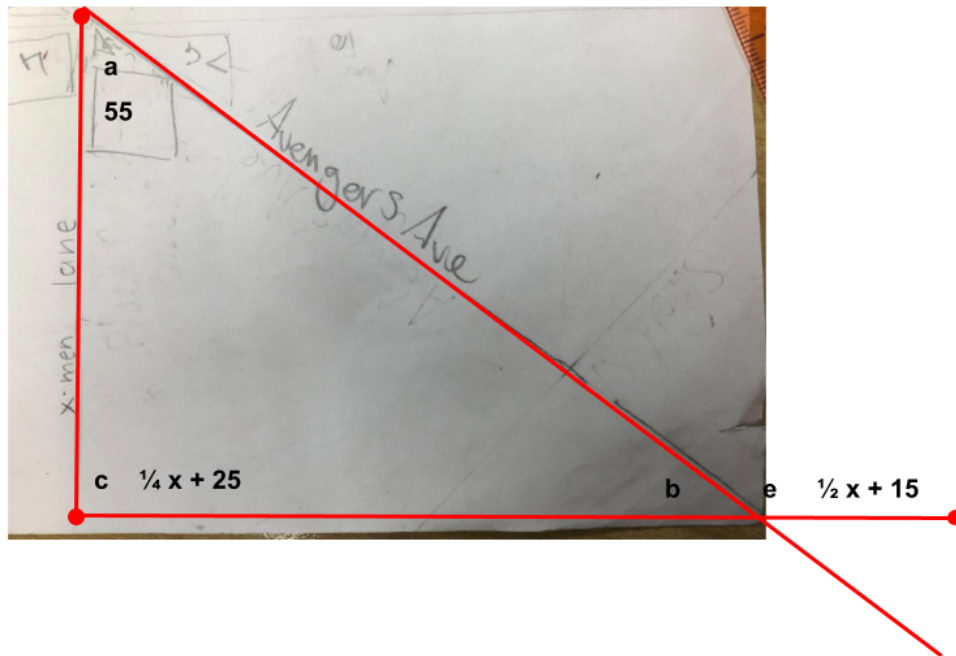
Pythagorean Theorem



<u>Statement</u>	<u>Explanation</u>
$XY = 4.2, YZ = 5.6, m\angle XYZ = 90^\circ$	Given
$(XY)^2 + (YZ)^2 = (XZ)^2$	Pythagorean Theorem
$(4.2)^2 + (5.6)^2 = (XZ)^2$	Property of Substitution
$17.6 + 31.4 = (XZ)^2$	Simplify
$49 = (XZ)^2$	Property of addition
$7 \approx XZ$	Square root
$(4.2)^2 + (5.6)^2 = (7)^2$	Substitution

<u>Statement</u>	<u>Explanation</u>
$49 = 49$	Check final answer

Triangle Theorem



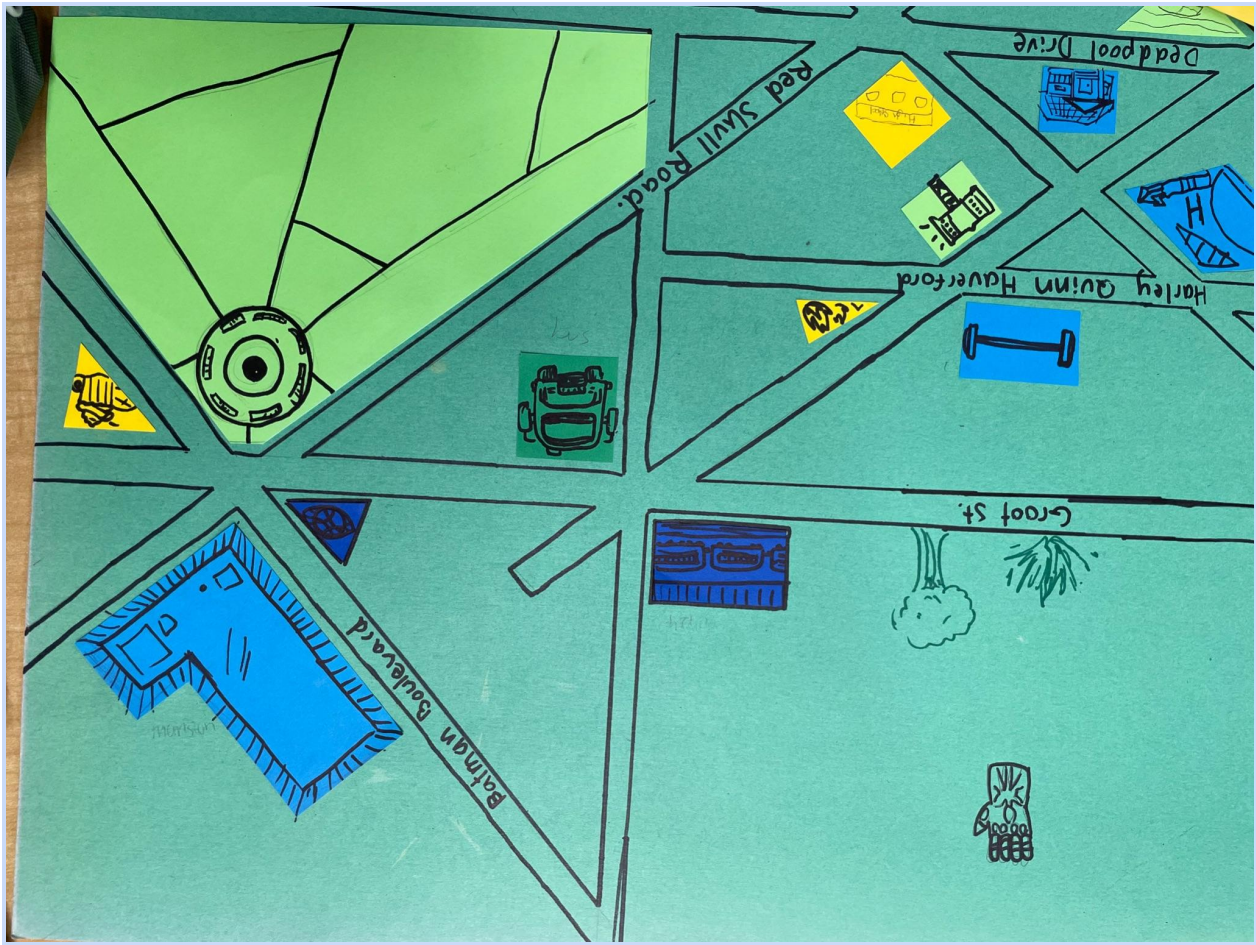
<u>Statement</u>	<u>Explanation</u>
$a = 55, c = \frac{1}{4}x + 25, e = \frac{1}{2}x + 15$	Given
$\angle a + \angle b + \angle c = 180$	Triangle Sum Theorem
$180 - \angle e = \angle b$	Linear Angle
$\angle a + \angle b = \angle e$	Exterior Angle Theorem
$(55 + \frac{1}{4}x + 25) + (180 - \frac{1}{2}x - 15) = 180$	Substitution
$245 + \frac{1}{4}x - \frac{1}{2}x = 180$	Simplify
$245 - \frac{1}{2}x = 180 - \frac{1}{4}x$	Property of subtraction

<u>Statement</u>	<u>Explanation</u>
$245 = 180 + \frac{1}{4}x$	Property of addition
$65 = \frac{1}{4}x$	Property of subtraction
$4(65 = \frac{1}{4}x)$	Multiplication
$260 = x$	Check final answer

Designer: Maddie

Hello and welcome to the first quadrant. My quadrant is the only one on the map with a large park, which takes up a large part of the map. It's filled with nature and wildlife, not unlike central park in NYC. Bruce Wayne's mansion is the biggest building in the first quadrant, and it's able to be seen, high above the other buildings. It's a good landmark for trying to make your way around the city. The train stop is at the intersection of Groot Street and Black Panther Boulevard, and it's a great way to quickly get around the city. Black Widow's Bakery is the best place to grab breakfast/lunch on the go, they've got the best bagels in the world! The last place I'd like to introduce you to is spiderman street. It's one of the main roads in the city and it's got popular stores lined up and down the road.

Map and Instructions of Quadrant:



All buildings:

Quadrant 4:(maddie)

1. (Black widow's Bakery)
2. Thor's weapon store)
3. Superfast Subway
4. Black Panther Blvd. Bus station
5. Fantastic Four Fire station
6. Doctor strange's house
7. Superhero Gym
8. Bruce Wayne mansion
9. City park

Directions:

- Groot St. goes from east to west and crosses the entire page horizontally.
- Harley Quinn Haverford is also east to west, it's parallel to Groot St, but stops halfway through the map. Black Panther Boulevard is north to south and is perpendicular with Groot St. and Harley Quinn Haverford its end is where Black Panther Boulevard runs across the map.
- Red Skull Road spans northeast and ends when it crosses Black Panther Boulevard
- Spiderman St. goes northeast and passes through Harley Quinn Haverford, and stops soon after it creates a three-way intersection with Black Panther Boulevard and Groot street.
- Batman Boulevard goes southeast and makes an intersection with Red Skull road and Groot St.
- Black Widow's Bakery(1) is below Groot St. and Red Skull Rd. but it's above Batman Boulevard.
- Doctor Strange's house(6) is vertical with Black Widow's Bakery(1).
- Thor's Weapon Store (2) is located at the intersection of Spiderman St. and Harley Quinn Haverford
- Superfast Subway Station (3) is at the intersection of Black Panther Boulevard and Groot street.
- Black Panther Boulevard Bus station (4) is vertical from the Superfast Subway Station (3)
- Fantastic Four Fire Station (4) creates a supplementary angle with Thor's Weapon Store (2).
- Superhero Gym (7) is vertical to Thor's Weapon Store (2).
- The Bruce Wayne mansion (8) is located in the northeast quadrant, at the intersection of Batman Boulevard and Red Skull Road, north of Dr. Strange's house.
- City park (9) is vertical to Bruce Wayne's mansion(8).

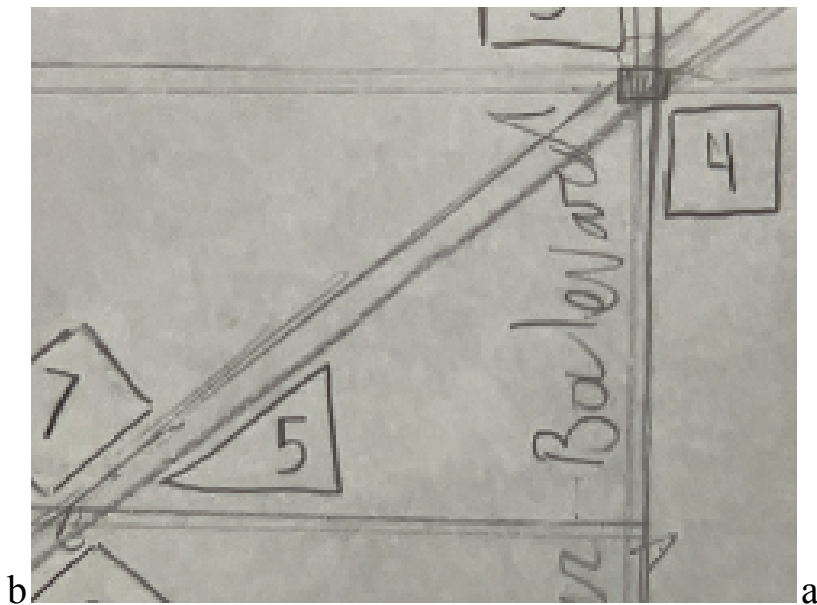
Triangle and Triangle Theorems:

Heroville is a very interactive and inclusive city, with something for everyone. The creators wanted to make sure that everyone could be comfortable, and thus the current design of the city came out.

Pythagorean Theorem:

$AB = 5, AC = 3.9$	given
$a^2 + b^2 = c^2$	Pythagorean theorem
$(AB)^2 + (AC)^2 = (BC)^2$	Property of substitution
$(5)^2 + (3.9)^2 = (BC)^2$	Property of substitution
$25 + 15.21 + (BC)^2$	simplification
$40.21 = (BC)^2$	Combine like terms
$6.3 = BC$	Square root

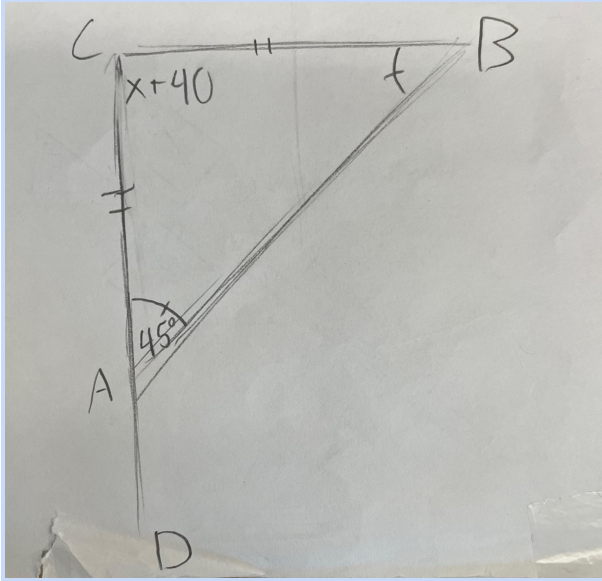
c



b

a

Triangle Angle Sum/Exterior Angle:



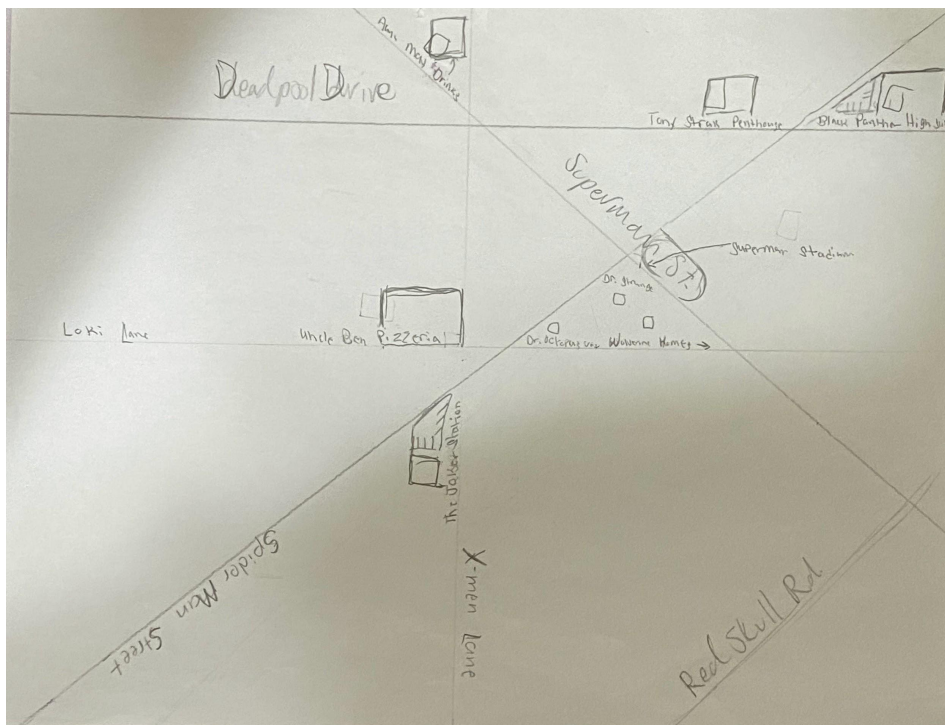
solve for x !		solve for y	
$a = 45^\circ$	given	$m\angle CAB = 45^\circ$	
$b = 45^\circ$	isosceles triangle th	$m\angle BAD = 180 - 45$	
$180 - (45 + 45) = c$		$m\angle BAD = 135^\circ$	
$90 = c$	simplify		
$c = x + 40$			
$90 = x + 40$			
$50 = x$			

Designer: Mashrur Chowdhury

Hey there, welcome to Quadrant 3! Here you will find that most of the areas are triangle shaped. Something that you will find only in Quadrant 3 is that here is the only school to be found. A little fun fact is that the World Cup was held in Superman Stadium where Messi and Argentina finally won their 3rd World Cup!

Discuss the highlights of this quadrant (at least 4). Highlights could include favorite sites for tourists in your neighborhood, key historical facts, etc.

Map and Instructions of Quadrant:



- Apartments (Tony Stark Penthouse)
- Stadium (SuperMan Stadium)
- Vet (Dr. Octopus)
- Hospital (Dr. Strange)
- Gas station (The Joker Station)

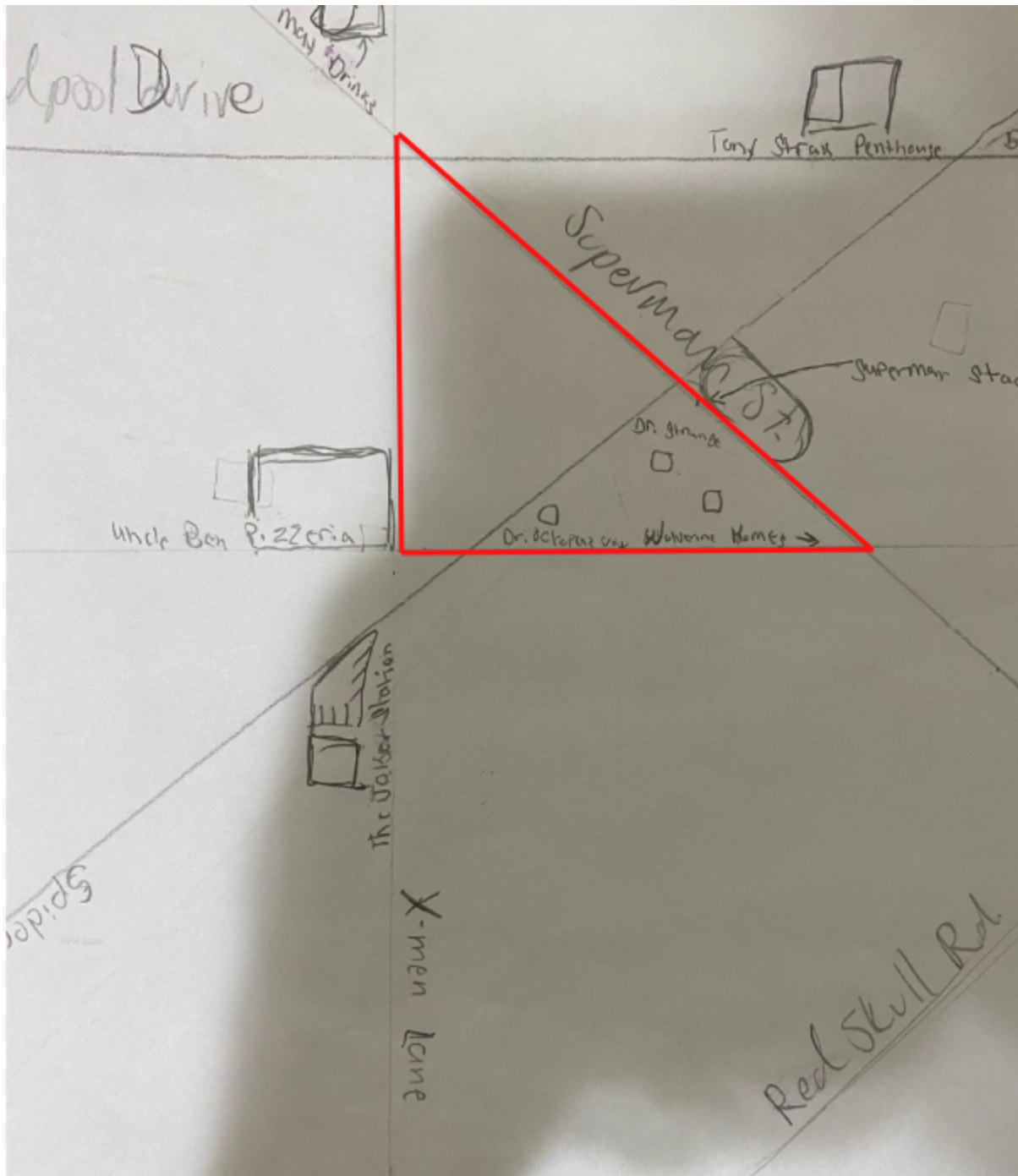
- Schools (Black Panther High School)
- Starbucks (Aunt Mary's Drink)
- Pizza Hut (Uncle Ben Pizzeria)
- Houses (Wolverine Homes)

Quadrant Instructions

- Deadpool Drive runs east to west and is parallel to Loki Lane.
- Spiderman street is a transversal that crosses paths with Loki Lane and Deadpool Drive.
- X-Men Lane is perpendicular to Loki Lane.
- Dr. Strange Hospital is adjacent to Superman Stadium and Superman Street.
- Black Panther High School is on a corresponding angle with Dr. Octopus. They are also both acute angles.
- Tony Stark Penthouse is on an obtuse angle formed by Deadpool Drive and Spider-Man Street.
- Uncle Ben Pizzeria is located at the northwest intersection of Loki Lane and X-men Lane.
- There is a complementary angle formed by Deadpool Drive and X-men lane. In the northeast section is Aunt May drinks
- Loki Lane and X-Lane cross paths to create a right triangle
- Tony Stark Penthouse is at an Adjacent Angle with Black Panther High School. They are also a linear pairs.
- Spider-Man Street and Superman Street intersect to form two vertical angles. One of those vertical angles has Superman Stadium on it.
- The SW corner of Deadpool Drive and Spiderman St. is on an alternate interior angle from Dr. Octopus Vets. The SE corner of Deadpool Drive and Spiderman St. is on a consecutive angle from Dr. Octopus Vets.
- The SW corner of Loki Lane and Spiderman St. is on an alternate exterior angle from Black Panther High School.

Triangle and Triangle Theorems:

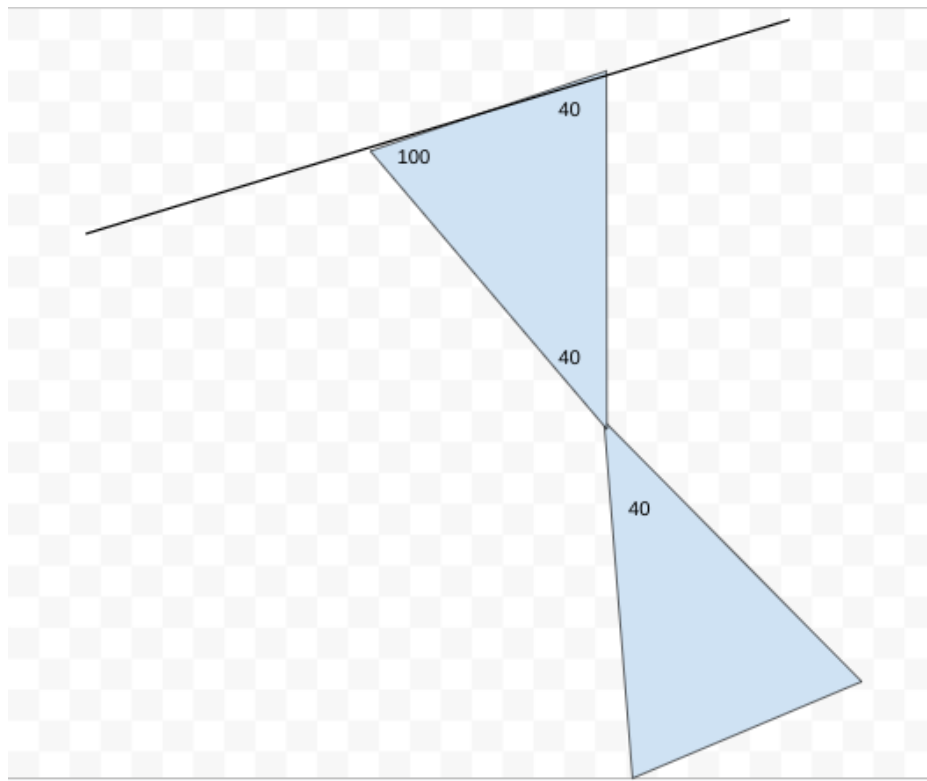
Pythagorean Theorem:



Statement	Explanations
AB=2.5 BC=3.4	Given

$a^2 + b^2 = c^2$	Pythagorean Theorem
$AB^2 + BC^2 = AC^2$	Substitution
$2.5^2 + 3.4^2 = C^2$	Substitution
$6.25 + 11.56 = C^2$	Simplify
$17.81 = C^2$	Combine Like Term
$C = 4.2$	Square Root

Triangle Theorem



$$10x+10+x+25+3x-5=100$$

$$10x+30=100$$

$$10x=70$$

$$x=7$$

Designer: Brelynn

Hey and welcome to quadrant 4! In my quadrant you wish to see lots of different and cool things. I have 3 real school skyscrapers, which you will only see in my quadrant. Something cool about my quadrant is that Dr.Strange stadium is actually where the eagles won their latest game!

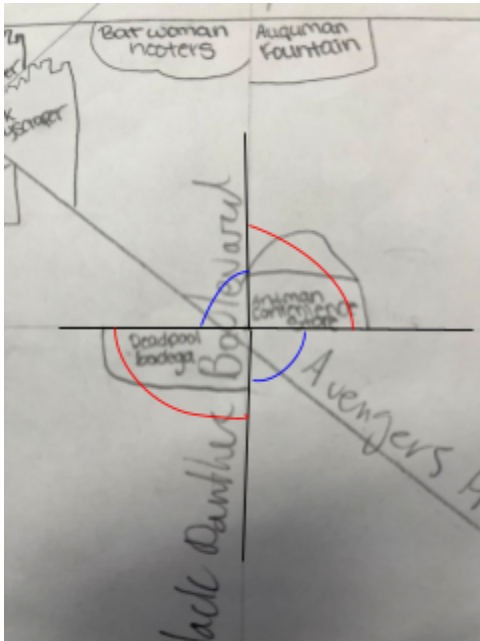
Map and Instructions of Quadrant:



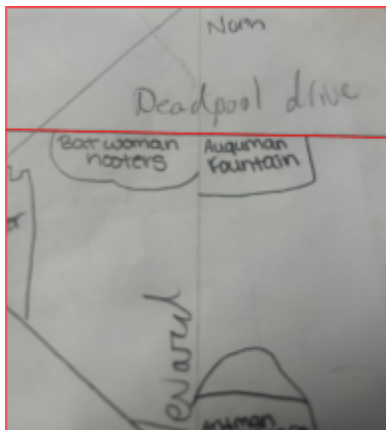
- 2 Corner store (Antman convenience store, deadpool bodega)
 - 3 skyscrapers (Superwoman skyscraper, hulk skyscraper, Iron man skyscraper)
 - 1 stadium (Dr. Strange stadium)
 - Monument (Thor monument)
 - Hooters (Batwoman hooters)
 - Fountain (Aquaman fountain)
-

- ★ My first road is Deadpool drive. Deadpool drive runs through the north side of my map. Deadpool drive is going from east to west on my paper.
- ★ Then we have Loki lane. Loki lane is parallel to Deadpool drive. Loki lane runs through the south side of my map, also going from east to west.
- ★ Next we have Avengers Avenue. Avengers avenue runs through the south east direction of my map, and intersects Deadpool drive, Loki lane, and Red skull road, and is also a vertical angle to Red skull road. It also is a transversal to deadpool drive and Loki lane.
- ★ Following we have Spiderman street. Spiderman street runs through the south west direction of my map, and intersects Red skull road.
- ★ After that we have Red skull road. Red skull road runs through the northwest of my map, and is a transversal to Deadpool drive, and Loki lane, and also intersects Avengers ave, and Deadpool drive.
- ★ Lastly we have Black Panther boulevard. Black Panther boulevard runs through the north south side of my map, and intersects Avengers avenue, Loki lane, and Deadpool drive.
- ★ For my buildings we have (Antman convenience store, Deadpool bodega, superwomen, hulk, and Iron man skyscraper, Dr. Strange stadium, Thor

monument, Aquaman fountain, Batwoman hooters)

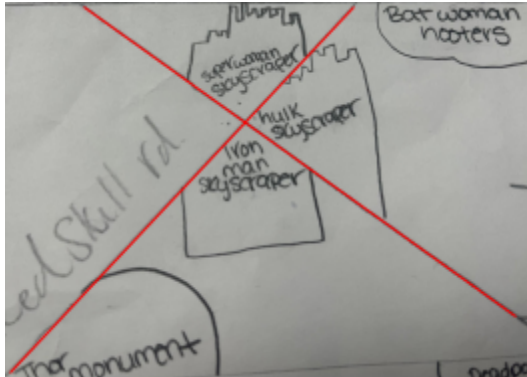


- ★ First, I have my 2 corner stores (Antman convenience store and Deadpool bodega.) Antman convenience store and Deadpool bodega are vertical angles. They are vertical angles because as you can see they are right across from each other.

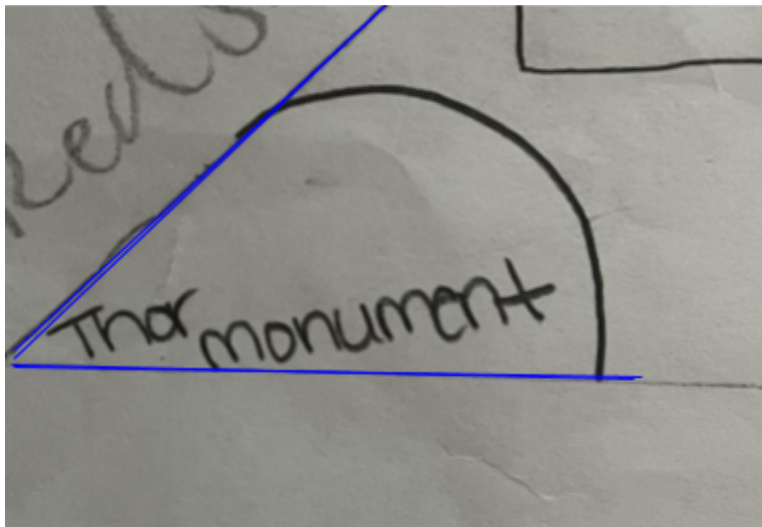


- ★ Next we have Batwoman hooters. Now batwoman hooters are a linear pair to Aquaman fountain. I know this because there is a straight line above both of the angles/places. Also, it is located at the north side of my map.

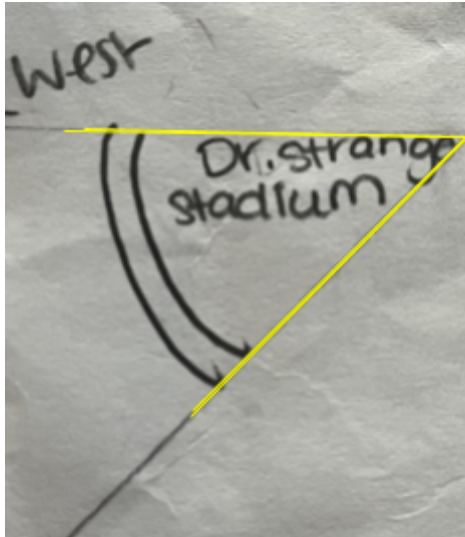
- ★ Then we have all of my skyscrapers. All of my skyscrapers are vertical angles. I know this because the angles/places are in an X, so they are all the same angle. These places are located at the north west of my map.



- ★ Next we have the Thor monument. Thor monument is actually an acute angle. I know this because the angle of Thor monument is less than 90 degrees, and it is located at the south west side of my map.

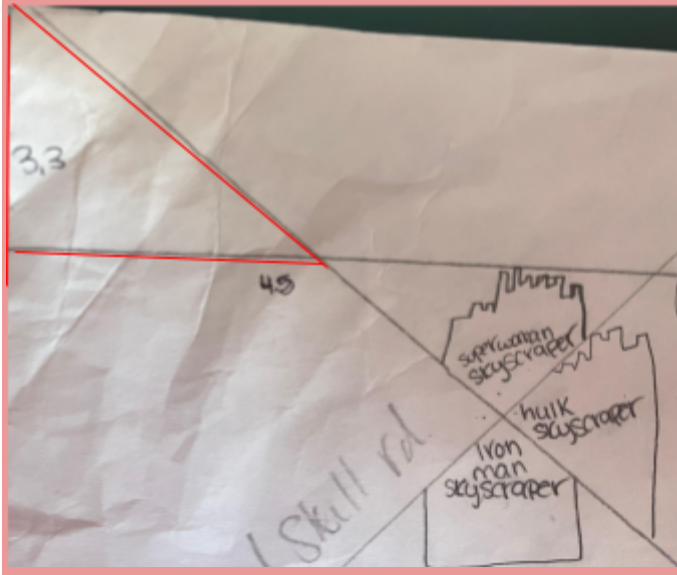


★ Lastly, we have Dr. Strange stadium. Dr. Strange stadium is also an acute angle. The angle is less than 90 degrees. That is how I know that it is an acute angle. It is located at the south west of my paper



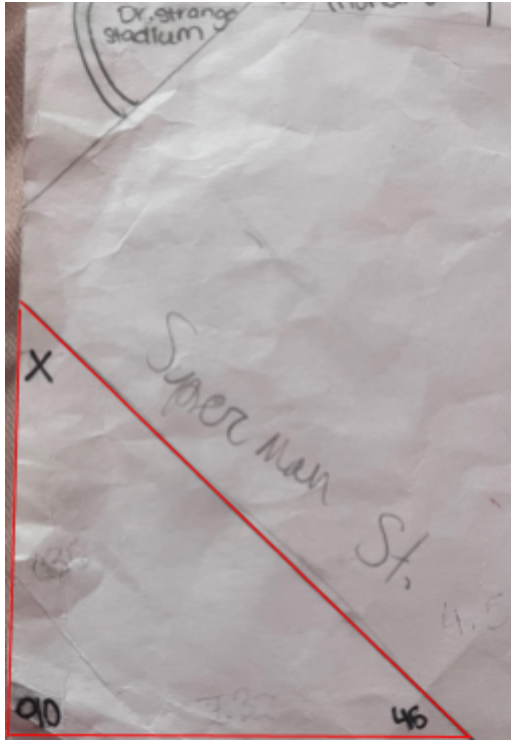
Triangle and Triangle Theorems:

Pythagorean theorem



Statements	Explanations
$AB = 3.3, BC = 4.5$	Given
$a^2 + b^2 = c^2$	Pythagorean Theorem
$(AB)^2 + (BC)^2 = (AC)^2$	Substitution
$3.3^2 + 4.5^2 = (AC)^2$	Substitution
$10.89 + 20.25 + (AC)^2$	Simplify
$31.14 = (AC)^2$	Combine like terms
$AC = 5.5$	Square root

Triangle Theorem



Statements	Explanations
$AB = 6.6, BC = 7.3$	Given
$A^2 + b^2 = C^2$	Pythagorean Theorem
$(AB)^2 + (BC)^2 = (AC)^2$	Substitution
$6.6^2 + 7.3^2 = (AC)^2$	Substitution
$43.56 + 53.29 = (AC)^2$	Simplify
$96.85 = (AC)^2$	Combine like terms
$AC = 9$	Square root

Conclusion:

Doing this project I think me and my group learned what real teamwork is. We created a whole city together and did our correct parts, and we cooperated with each other and everybody got their stuff done in a good enough time. It was really fun working with my group and I look forward to working with them again.

Throughout this whole process I did well on listening, paying attention, and cooperating. Overall I think that we did a really good job working together, and hopefully we can do more projects together.